GENERAL LIBRARY University of MICHIGAN

THE

MEDICAL NEWS AND ABSTRACT.

VOL. XXXVIII. No. 9. SEPTEMBER, 1880. WHOLE No. 453.

(For List of Contents see pp. 575-6.)

CLINICS.

Clinical Lectures.

ON SEXUAL DEBILITY, SEXUAL EXHAUSTION, AND IMPOTENCE.

A CLINICAL LECTURE DELIVERED AT THE JEFFERSON MEDICAL COLLEGE HOSPITAL.

BY SAMUEL W. GROSS A.M., M.D.,

LECTURER ON VENEREAL AND URINO-GENITAL DISEASES IN THE JEFFERSON MEDICAL COLLEGE OF PHILADELPHIA, AND SURGEON TO THE HOSPITAL.

GENTLEMEN: At my last two clinics I introduced patients with certain general and local motor, sensory, and secretory neuroses dependent upon lesions of the urino-genital apparatus. Of the nervous disorders relating to muscular movements remote from the genital organs, you will remember a lad, eight years of age, with paralytic talipes equinus, and a child of four years who was suffering from impairment of the power to coördinate the voluntary movements of the lower extremities. In both of these cases the trouble arose from an elongated, contracted, and adherent prepuce. You also had under observation a man, twenty-three years of age, who was greatly annoyed by vertigo and twitching of the muscles of the legs, which were traced to excessive sensibility and stricture of the urethra. Of the sensory neuroses you have seen examples of morbid states of the urethra giving rise to pain in the back, shoulders, nucha, head, and in one case at the outer side of the tendines Achillis; and I had before you a man in whom numbness of the thighs was a prominent symptom.

In addition to these reflex nervous disorders of the system at large, you will recall the cases of neuroses of the urino-genital organs themselves arising from various affections of those systems. Among the local neuropathies you have witnessed instances of spasm of the urethral muscles, and of spasm and paralysis of the sphincter and detrusor muscles of the bladder. Of the sensory troubles, cases of hyperæsthesia of the urethra, testes, and spermatic cord were quite common; while of the secretory neuroses, which were also combined with motor and sensory phenomena, I have introduced examples of prostatorrhœa, nocturnal pollutions, and true spermatorrhœa. In the majority of these cases we found other symp-

toms, such as impairment of memory, troubled and unrefreshing sleep, a feeling of heaviness on rising, coldness of the hands and feet, poor appetite, constipation, coated tongue, palpitation of the heart, and additional signs of dyspepsia. Prominent among the subjective symptoms were dorsal pain, which was increased by exercise and exposure; muscular weakness of the limbs, so that the patients were exhausted by comparatively slight exercise and exertion; and a feeling of fatigue on getting out of bed. These phenomena, I told you, indicated neurasthenia, nervous exhaustion, or the depressed form of spinal irritation, which, in the absence of post-mortem evidence, is supposed to be due to anæmia of the lumbar division of the cord.

In endeavouring to account for these symptoms I impressed upon you the necessity of exploring carefully the male organs of generation when examination of the cerebro-spinal axis failed to throw light upon them. While phimosis, acquired or congenital contraction of the urinary meatus, balanitis and stricture of the urethra frequently give rise to reflex neuroses, I have found that they are usually traceable to inflammatory disorders of the prostate, which bear the same relation to nervous affections in the male that lesions of the uterus do to allied disorders in the opposite sex. The prostate, with its intercallated acinous glands, and the structures that are contained within or traverse it, as the urethra, the veru montanum, the sinus pocularis, or prostatic vesicle, or utriculus, which is the homologue of the uterus, and the ejaculatory ducts, are supplied by large nerves derived from the hypogastric plexus of the sympathetic, the sacral plexus of the spinal nerves, and, through the lumbo-sacral trunk, from the lumbar plexus. In consequence of the free interchange of fibres between the sympathetic and the cerebro-spinal systems of nerves, it is obvious that the component parts of the genitalia are not only in intimate connection with one another, but also, through the agency of the cord, with remote parts. Hence it is that prolonged hyperæmia or inflammation of the prostate and its included structures gives rise not only to essential symptoms, but occasions various signs in other organs and tissues which are of a reflex or functional nature. If the inflammation becomes chronic, and if the causes that produce it, of which the most common is undue excitement of the sexual function from masturbation, excessive venery, and unsatisfied and prolonged desire, be kept up, exaggerated irritability of the medullary and vaso-motor centres will set in and soon be followed by exhaustion or anæmia of the lumbar spinal cord, and the condition known as neurasthenia.

I shall ask your attention this morning to sexual exhaustion, which is another common and distressing reflex neurosis connected with the male genital function, although impotence, or inability to perform coitus properly, may result from vices in the conformation of the genital organs, or be merely symptomatic of central lesions of the nervous system. Of this condition arising from inflammatory affections of the reproductive apparatus, to which alone I shall refer, there are several grades which I will illustrate by typical cases, derived mainly from the out-patients' department.

Case I.—A teacher, 24 years of age, tells me that he acquired the habit of masturbation when he was fifteen or sixteen years old, and that he kept it up for about three years. During the ensuing two or three years he had occasional sexual intercourse, but, to use his own language, "for the past twenty-four months I was unable to perform the act, owing

to an insufficient erection and a premature discharge. My greatest trouble for five years has been voluptuous dreams; and the nocturnal emissions would sometimes occur for five consecutive nights, causing great mental and physical depression. I find that in toying with or fondling women a discharge oozes from my urethra in quantities sufficient to stain my linen. My memory is impaired; I have lost some flesh; and I am easily fatigued."

You will observe that the external genitalia are normal. On inserting a No. 22 French exploratory bougie, I discover a stricture one-eighth of an inch behind the meatus, and I find that its further passage is attended with great pain, which becomes excessive in the prostatic portion of the urethra. On withdrawing the instrument I find that its shoulder is arrested by another coarctation at five inches and three-quarters, and that it brings away some prostatic discharge.

CASE II.—A mechanic, 26 years of age, states that for the past eighteen months he has had intercourse with one woman three or four times every night, and that he occasionally fulfilled engagements of a similar nature with other females. Latterly he has observed that his powers were growing feeble, and at present his erections are flabby and his ejaculations precipitate. He looks pale; is easily fatigued; and suffers from pain in the back and from frequent and painful micturition.

As in the preceding case, the penis and testes are perfect; but a No. 25 explorer detects a very sensitive urethra and a stricture seated at six inches from the meatus. The neck of the bladder is also extremely irritable.

CASE III.—A weaver, 37 years of age, has been under treatment in the out-patients' department for the past month for hyperæsthesia of the urethra complicated by two strictures, one of which is located at three inches and a half and the other at six inches from the meatus, the latter being narrow and tortuous and only permeable by soft instruments. He has had gonorrhœa three times, the last attack having occurred fourteen years ago; and for the past three years the erections have been growing more and more feeble, until they frequently passed off before intromission, and coitus was always attended by precipitate ejaculation. In addition to his sexual troubles, he complains of numbness along the outer side of the left thigh, almost constant dorsal pain, and a dull, heavy pain in the back of the head, the left side of the neck, and the left shoulder, all of which localities now and then suddenly and temporarily become red and hot. The suffering is aggravated by exercise and continuous work; his sleep is unrefreshing; and he has dyspeptic symptoms.

These three cases represent the most common form of sexual debility, the prominent signs being imperfect or feeble erection and premature ejaculation. Desire, however, is unimpaired, and intercourse is possible, although it is unsatisfactory. In all the exciting cause was chronic hyperæsthesia and inflammation of the prostatic urethra which was produced, respectively, by masturbation, excessive coitus, and gonorrhœa, and was kept up by one or more strictures. One case was complicated by nocturnal emissions, and another by inflammation of the neck of the bladder. In all there were symptoms of neurasthenia and anæmia of the lumbar division of the spinal cord; and as Goltz has shown that this portion of the cord is the centre for the erigent and ejaculatory nerves, we can readily account for impairment of the virile power when its healthy action is depressed or its energy is diminished.

The next patient whom I shall introduce illustrates the second grade or form of sexual exhaustion, which is characterized by entire loss of the power of erection, without, however, abolition of desire. Hence persons affected in this way are not only impotent, but from their inability to practise coitus, they are also sterile.

CASE IV.—This man is a mechanic, aged 23 years. At about his sixteenth year, after having been in the habit of masturbating freely for six or seven years, he observed a urethral discharge. He never had sexual intercourse until he was twenty-one; and, after a few months of moderate indulgence, the discharge increased, and the erections became more and more weak until he was finally unable to consummate the act, although the desire remained. He is pale; suffers much from pain in the back, the shoulders and anus, and the left temporo-maxillary articulation; and is easily fatigued.

When he presented himself two weeks ago, examination with a No. 25 explorer, which was attended with great nervous agitation, disclosed intense hyperæsthesia of the entire urethra, and particularly of its prostatic portion, but there was no indication of a stricture. He afterwards rode to his house in the street cars, and about two hours later, after urinating, he was seized with a curious crawling sensation in his arms and legs, lost consciousness, and, when found by his friends, was lying on the floor, and his face was livid. On his next visit, three days subsequently, he was placed upon thirty grains of bromide of potassium with five drops each of juice of belladonna and tincture of gelsemium every eight hours, and directed to take ten grains of quinia one hour before his next visit, which occurred one week ago. At that time a conical steel bougie was passed, and one-third of a grain of morphia thrown under his skin.

To-day he reports that the passage of the instrument brought on a slight epileptoid paroxysm, as indicated by clonic spasms of the muscles of the arms and eyelids, and a feeling as if he would become unconscious; and these symptoms were followed by prostration and numbness of both hands. With the view of preventing or mitigating a similar seizure he has taken ten grains of quinia, and he will have a third of a grain of morphia administered hypodermically before he leaves the amphitheatre. You will observe, as soon as the exploratory bougie enters the canal, the tremor and retraction of the testes, and as the bulb reaches the prostatic urethra you see that he shrinks from the excessive pain which it awakens, and that the muscles of the lids, nose, and mouth twitch convulsively. On withdrawing the instrument it is found to be covered with prostatic secretion.

As in the previous cases, the sexual difficulty in this man arises from inflammation and morbid sensibility of the urethra, and more particularly of its prostatic portion. It is moreover interesting from the fact that instrumental contact provokes epileptoid attacks, a complication which is by no means commonly witnessed.

In the third phase of the affection, not only is there complete loss of erectile power, but sexual desire is likewise abolished. Fortunately I have no illustration of this condition. I say fortunately, because the subjects are extremely liable to melancholy and hypochondrism; and although the lesions upon which their impotence depends may be removed, their mind is so seriously affected that a final recovery is almost hopeless.

Finally, there is a fourth class of cases, in which there is desire and complete power over erection and coitus, but the patient is unable to have a seminal discharge, although he may have voluptuous sensations.

This peculiar state, which is known as aspermatism, I include among the reflex neuroses from inflammation and hyperæsthesia of the prostatic portion of the urethra, because I discovered those lesions in the four instances that have come under my observation. Aspermatism may be due to a tight stricture, to absence, obstruction, or deviation of the ejaculatory ducts, either as the result of disease, injury, or a congenital vice, to obliteration of the prostatic vesicle, and to various morbid conditions of the prostate and testis. Of these lesions, however, I have nothing to say, as I distinctly stated at the beginning of this lecture that I would only consider impotence as a temporary neurosis arising from inflammation and undue sensibility of the prostatic urethra.

In the majority of cases, although there is absence of ejaculation on coitus, the patient has nocturnal emissions; but when he is awake neither the venereal act nor masturbation can provoke a seminal discharge. Just exactly what the trouble is, is a mere hypothesis; but I fancy that there is a want of excitability of the reflex ejaculatory centre, or that there is reflex atony of the muscular structure of the seminal passages. However this may be, the next patient affords an admirable illustration of this curious condition complicated by prostatorrhœa.

Case V.—A teacher, 22 years of age, had gonorrhœa five years ago, which degenerated into a gleet. For the past three years he has had a more or less colourless discharge, particularly after erections and straining at stool. During the past eighteen months he has been unable to have an ejaculation during coitus, although he prolongs the act until fatigue requires him to cease. Now and then he has a nocturnal emission, attended with diminished sensation, under the influence of a voluptuous dream; and erections are provoked by slight causes. He is continually morbid about his condition, so that he can scarcely attend to his daily duties, being unable to fix his thoughts for any length of time upon any subject except his sexual trouble. He has pain in his back, loss of appetite, and palpitation of the heart.

Exploration with a No. 25 bulbous explorer discovers a very sensitive prostatic urethra, a linear stricture at six inches from the meatus, and a considerable prostatic discharge.

In all of the cases that I have introduced, hyperæsthesia, particularly of the prostatic urethra, which was maintained in four out of the five by one or more strictures, and induced by masturbation, sexual excesses, and gonorrhœa, was the prominent symptom. Hence, I feel warranted in stating that undue sensibility and excitement of the prostatic portion of the canal and of the ducts which open into it, are the most common and important causes of the spinal reflexes which make themselves known by the various grades of sexual exhaustion or impotence, and other signs of the depressed form of spinal irritation.

Of the relative frequency of the four varieties of sexual troubles of which I have spoken, an examination of 97 cases that have come under my personal observation discloses that 87 were examples of feeble erection and premature ejaculation; 4 were instances of loss of power of erection, with retention of desire; 2 were examples of loss of both power and desire, and both were hypochondriacs; while 4 came under the class of aspermatism.

The etiological factors were, gonorrhœa in 30, masturbation in 66, and excessive coitus in 1. Just how far prolonged and unsatisfied passion, produced by toying with females, is to be considered an exciting cause of

the affection I am unable to say, since I find that young men addicted to this habit are very liable to relieve themselves by onanism.

With regard to masturbators I have made some notes that are interesting and practically useful. Thus I find that one in every three has an elongated prepuce; one in every five has an inflamed meatus; one in every two and a half has a very sensitive urethra; that the same proportion suffers from a gleety discharge; and that one in ten has a small penis. As I have pointed out in a paper read before the Philadelphia County Medical Society, and published in the *Medical and Surgical Reporter* for May 3, 1877, and in a paper which appeared in the *Transactions of the American Medical Association* for 1877, protracted masturbation is just as sure to result in urethritis and the formation of stricture as is a chronic clap. Of the 66 masturbations only 3, and one forms the subject of Case IV., were free from stricture, so that that lesion should always be looked for in this class of patients. In about five-sixths of the cases there is only one coarctation, while in the remainder two or more strictures will be found. In one-sixth of the entire number the contraction is seated within the first inch of the urethra.

In the treatment of disorders of the genital function arising from preternatural sensibility of the prostatic urethra your first care should be to make a thorough examination of the generative and associated organs with the view of getting rid of the causes which produce and maintain them. If the patient has a redundant prepuce, it should be removed; if the meatus be contracted, it should be enlarged; while herpes of the prepuce and glans, or balanitis should be treated in the usual way. All of these lesions are capable of setting up hyperæsthesia of the prostatic portion of the urethra, or even of exciting reflex impotence without the intervention of prostatic trouble, and their relief is quite sufficient in mild cases to restore virility. The same statement is true of certain diseases of the rectum, so that the lower bowel should receive due attention.

In the great majority of cases you will find, as you have learned from the patients that have been brought before you, that the treatment is to be directed to overcoming the hyperæsthetic prostatic urethra, which is usually complicated by stricture of the spongy portion of the canal. Hence your remedies, whether these be local or general, must be of a sedative nature; and your patient at the outset should be impressed with the importance of avoiding all sources of sexual excitement, such as coitus, masturbation, dalliance with women, and lascivious thoughts and literature. Of general remedies, the aphrodisiacs, as cantharides, phosphorus, and damiana, are harmful; while anaphrodisiacs are always indicated. Of the latter, an extended experience has convinced me that bromide of potassium is by far the best, as it not only blunts the venereal appetite, but also corrects the acidity of the urine, and exerts an anæsthetic influence on the urethral mucous membrane. I am in the habit of administering thirty grains every eight hours, unless I find it makes the patient too drowsy during the day, when I order a drachm to be taken at bedtime. If signs of bromism appear, I reduce the dose; or if the remedy is badly borne I usually substitute ten drops of tincture of belladonna, and five drops each of tincture of gelsemium and Fowler's solution, three times a day, which is an admirable combination. The preparations of belladonna are particularly appropriate when the case is complicated by nocturnal emissions, and may be given in the form of the fluid extract, tincture, or juice, or of atropia

administered hypodermically or by the mouth. When the patient is anæmic, he should also take tonics, of which a combination of quinia, tincture of the chloride of iron, and tincture of nux vomica is one of the most suitable.

In addition to sedatives and tonics the bowels should be kept in a soluble condition, particular attention being paid to the rectum. For this purpose, ordinary hydrant water may be thrown into the lower bowel every morning, as it has the additional advantage of soothing the irritated prostatic urethra. If cool water enemata do not answer the purpose, and there is atony of the muscular coat of the intestines, a pill composed of two grains of the compound extract of colocynth, half a grain of the extract of nux vomica, and the tenth of a grain of extract of belladonna may be administered on going to bed; or, if it be deemed desirable to act on the liver, a wineglassful of Hunyadi water, or two or three drachms of equal parts of Epsom and Rochelle salt, may be ordered every morning. Any especial dyspeptic symptoms are to be met by appropriate remedies.

The diet should be nutritious and digestible, but unstimulating. The patient must eschew coffee, malt and alcoholic liquors; and his supper should be light. He should sleep on a hard mattress, use only the lightest coverings, and empty his bladder thoroughly on retiring, and early in the morning, if an erection indicates fulness of that viscus. He is to be warned against horseback exercise and driving over rough streets and roads, and all other forms of amusement which tend to produce hyperæmia of the genitalia, as well as against mental and bodily fatigue if the signs of neurasthenia be marked. Benefit will accrue from moderately cool lotions to the dorso-lumbar region, in the form of irrigation, the douche, or the wet sponge; and syringing cool water against the perineum will be found to be of great service when prostatic discharges or pain on exercise indicate that that organ and its included urethra are too excitable.

Of the local measures to overcome chronic congestion, inflammation, and hyperæsthesia of the veru montanum, the prostatic urethra, the ejaculatory and prostatic ducts, not one is so universally applicable as the passage of the conical steel bougie. The size of the instrument is to be gauged by that of the meatus if it be normal, or by that of the stricture if one be present, and its circumference should be gradually increased up to the full capacity of the urethra, as indicated by the urethrometer. To effect this, however, the meatus will have to be enlarged as a preliminary measure, or you may use my urethral dilator which dispenses with that operation. At first the bougie should be at once withdrawn, and the intervals between the insertion should be forty-eight hours. With the decrease of the sensibility it should be retained longer, and the intervals of introduction be shortened. If the stricture be irritable or resilient it should be subjected to internal urethrotomy, as no progress can be made unless the contraction be a simple one.

As an illustration of the readiness with which cases of sexual debility improve under simple and properly directed measures, I show you a patient who was before you just four weeks ago.

CASE VI.—On the 8th of April, a mechanic, aged 23 years, gave us the following history. He complained of a gleety discharge, which kept the lips of the meatus glued together, and had existed for two years and a half; of a discharge of prostatic fluid at stool; and of nocturnal seminal emissions, which were often as frequent as every night during a single week, and now and then occurred to the number of three in a night. The

erections were feeble, and ejaculation was premature. The bowels were costive, but he had no signs of spinal exhaustion. Examination with a No. 17 explorer disclosed a stricture one-eighth of an inch behind a contracted meatus, and a highly sensitive urethra, especially in its membranous and prostatic divisions. On withdrawing the instrument a few drops of prostatic fluid came away. I laid open the meatus along with the stricture, and directed the pill of colocynth, nux vomica, and belladonna at bedtime, and thirty grains of bromide of potassium every eight hours. The incision was prevented from closing by the passage of a No. 30 conical steel bougie, which was passed through the entire urethra every other day for three weeks, and daily for the past week. To-day, May 6th, the hyperæsthesia has almost entirely disappeared; the gleet has ceased; there is merely a slight prostatic discharge if the bowels are allowed to become constipated, but he has not noticed it for several days; there were nocturnal emissions on the nights of April 17 and 18, and the erections are improving in vigor. The treatment will be continued, and a cure may be looked for in another month.

All cases do not respond so quickly to treatment as this one. Should the tenderness of the urethra prove refractory, you may resort to compression combined with the local application of cold with the cooling sound, or psychrophor of Winternitz, which is nothing more than a double current catheter closed at its beak. By means of these tubes a stream of water of a temperature of about 59° should be passed through the instrument for ten minutes. In many instances you will find that the inflammation and morbid sensibility are finally reduced to a small, and probably granular, patch, which will demand astringent applications. Of these I prefer a twenty-grain solution of nitrate of silver, carried to the tender spot in the way you have so often seen me do, and which I told you I learned from M. Felix Guyon, the successor of Civiale at the Hôpital Necker, of Paris. I charge the small syringe with the solution, attach to its nozzle a hollow bulbous bougie or explorer, and press upon the piston until a drop of the fluid appears at the hole in the apex of the bulb. Wiping this off, I oil the bougie, carry it down until the bulb defines the inflamed patch, withdraw it slightly, when, with my finger on the piston, I deposit a few drops of the liquid in the urethra. The bladder should be emptied before making the application, and the patient should be kept in bed for some hours subsequently, and use demulcent drinks. With these precautions the only inconvenience to which he will be subjected will be some scalding during the next act of micturition. The application need not be made oftener than once a week. In the absence of this contrivance, you may employ the catheter-syringe, the instrument provided with a concealed sponge, or the porte-caustique of Professor Gross, the cup of which is charged with the nitrate rubbed up with stramonium ointment. When the affection proves more obstinate, as it is liable to do when it is chronic, and complicated by prostatorrhœa in mature subjects, flying blisters, made by pencilling cantharidal collodion on each side of the perineal raphé, are of the utmost service.

Up to this point you will observe that the treatment, both general and local, has been addressed to relieving the inflammation and hyperæsthesia of the deep urethra. When this has been accomplished, nothing more, as a rule, is required; but cases occur in which after the local lesions have been cured, the erections are still not sufficiently vigorous and the ejaculations are premature Our object now is to restore the sexual powers

by the internal exhibition of iron, quinia, strychnia, phosphorus, ergot, and tincture of cantharides, alone or variously combined; by cool hip-baths and cool applications to the dorso-lumbar region; and by electricity. The anode of a battery is placed over the lumbar spine, and the cathode carried over the spermatic cord, the testes, perineum, and back of the penis. The sittings at first should not exceed five minutes, or be repeated oftener than every forty-eight hours. The current, moreover, should be feeble, and not excite pain even when its strength is increased. When there is atony and relaxation of the ducts, as shown by prostatic and seminal discharges after the hyperæsthesia has disappeared, a negative urethral electrode may be passed down to the prostatic urethra, or one may lie in that locality while the other is inserted into the rectum. I must caution you, however, to be careful in the use of the urethral rheophore, as I saw not long ago in consultation with my friend, Dr. Asch, of New York, a gentleman who had lost his right testicle from suppuration through its employment while the urethra was still irritable. In addition to these measures a change of air, travel, exercise, amusement, and sea-bathing will do much to tone up the system.

The end having been accomplished, it remains to put your patient on his guard against sexual excesses. Unless he practises moderation, he is liable to a relapse; and if he is single you should advise him to marry. When sexual exhaustion arises from central nervous lesions, he should remain single; but when it is due to prostatic trouble, and there is no hypochondrism, you are perfectly safe and right in recommending matrimony.

In the management of these disorders, I have not had aspermatism in view. Although I have seen four cases, I have not been able to conduct the treatment in a single one; but as I fancy that this condition, when it is combined with inflammation and morbid sensibility of the deep urethra, depends upon atony of the seminal vesicles, I have no reason to doubt that the course which I have outlined will prove effective.

ON THE RADICAL CURE OF VARICOCELE BY THE GALVANIC ÉCRASEUR.

A Clinical Lecture delivered at the Westminster Hospital, July 3d, 1880.

By A. PEARCE GOULD, M.S., F.R.C.S.
Assistant-Surgeon to the Hospital, and Lecturer on Anatomy to the Medical School.

Gentlemen: Although there are very many cases of varicocele in which no treatment, or only palliative measures, are required, you will meet with others in which it will be your duty to undertake the permanent or radical cure of the varix. These cases are as follows: 1. Where the testicle is atrophying. 2. Where the varicocele is double, especially if an examination of the semen shows an absence of spermatozoa, or the patient, being married, is sterile. 3. Where the opposite testicle is lost or useless from tumour, orchitis, epididymitis, or injury. 4. Where the varix is large and increasing, in spite of palliative treatment. 5. Where the varix causes much pain, or interferes with proper exercise and necessary work. 6. Where it is the occasion of marked mental depression. 7. Where the varicocele prevents acceptance for either of the Government services.

There are many plans for securing the radical cure of varicocele, including castration, excision of the veins, the actual cautery, forcipressure, and ligature. The ligature is the method most commonly adopted, and has been variously modified by Ricord, Vidal, Erichsen, Wood, and H. Lee. (These methods of treatment were then described.)

Of the efficacy of these treatments there can be no doubt, but unfortunately they have two drawbacks—the pain attending them, and a certain amount of danger. For a long time surgeons avoided as far as possible any interference with veins, and although veins are now ligatured almost as freely as arteries, there is no doubt that diffuse thrombosis, embolism, and septic poisoning are more liable to follow injuries of veins than of arteries. This being so, it is plainly the surgeon's duty to avoid in every possible way any irritation or disturbance of an injured vein, and it is because this principle is not sufficiently carried out that the usual modes of treating varicocele have been attended with serious and even disastrous results. The daily twist of Vidal's pin, and constant traction of Wood's spring, are not only painful, but opposed to the great principle that demands perfect rest to all inflamed and injured tissues, and veins in particular, while, in Lee's operation, the presence of two harelip-pins transfixing the scrotum is apt to set up œdema and inflammation, and their removal is not without risk of embolism. That these are no imaginary fears is evident from the published results of these and analogous treatments. Gant says that the results of the operations are "variable," and include diffuse inflammation and sloughing of the scrotum, suppuration of the testicle, phlebitis, pyæmia, and death; Erichsen records two deaths from the twisted suture; Gross had one death after ligature; Sir E. Home had one nearly fatal case; Escallier mentions two fatal cases of phlebitis, and Curling speaks of three cases of serious results, two of which were fatal. Some years ago the censor of one of the chief London hospitals died from pyæmia after Lee's operation. This list by no means includes all the accidents of these treatments—it makes no mention of the pain suffered, or of the inflammatory œdema and suppuration of the scrotum.

It was with the hope of avoiding these complications that I was led, now more than two years ago, to try the plan of subcutaneous division of the veins by means of a platinum wire heated to a red heat by electricity. The procedure is, as you have seen, very simple. First, feel for the vas deferens, and grasp the veins in front of it, and nip in the scrotum with the left thumb and forefinger; transfix the scrotum at this spot between the duct and the veins with a narrow bistoury, and pass a needle armed with a platinum wire in the track of the knife; then return the needle through the same apertures, but this time in front of the veins between them and the skin. Of course, if the vas happen to be in front of the veins, as was the case in that of W. C., shown to-day, you modify the procedure a little. In this way you have the veins in a loop of the wire. It is better to make a puncture with a knife rather than merely to transfix with the needle, for the veins are looped up cleaner, there is not the same liability to include a portion of the skin in the noose as in the latter plan. Then attach the ends of the wire to the écraseur, and connect with the battery, using sufficient cells to cause a faint hissing noise; one cell of Grove's battery, or at most two, is sufficient. This step must be done deliberately; I have taken as long as five or six minutes over it. To protect the skin from burning, let some cold water trickle over it while the wire is burning its way through the veins. The after-treatment consists in perfect rest in bed for a few days, with the scrotum supported on a broad strip of strapping fixed across the front of the thighs. I have three times operated without anæsthesia, but the pain may be severe, and I prefer to have the patient under the influence of ether. After recovery from the anæsthesia there

is an entire absence of pain, and this perfect freedom from spontaneous pain continues uninterrupted throughout the convalescence. A few hours after the operation the knobby feel of the varix is replaced by a soft even swelling, which lessens and hardens, and at the end of forty-eight hours is usually to be felt as a hard lump, about the size of a big marble. This is tender on pressure. By the end of a week it has lost its tenderness, and has shrunk to three-quarters its original size. The veins below can still be felt full, but not compressible, the blood in them has by that time coagulated, and they become smaller and firmer, until ultimately a small pea-like induration in front of the vas is all that is left, and even this may disappear, and no trace of the varix or operation be left, as in W. S.

I have employed this method eight times, each time the varix has been cured, the symptoms complained of relieved, and no mischief to the testicle has followed. These eight cases have shown me that there are three things to be carefully avoided. The first is hurry in the section of the veins; twice a few drops of blood have followed the escape of the wire, but only so little as to require nothing more than lint or cotton-wool to be placed over the wound; in neither instance was there any hæmatocele. The second is to operate well above the tunica vaginalis; in one of my cases acute hydrocele was lighted up, it quickly subsided under belladonna fomentations. The third is burning of the skin, leading to a small slough; although there is nothing of serious moment in this slough, it is of course best to avoid it, and if the skin is incised and kept cold and the loop of wire not brought too small it can generally be saved.

I can recommend you to practise this operation, first, because of its entire painlessness after the few moments of its actual performance, and, secondly, because it fulfils the physiological indications better than any other I know of. My cases at present are too few to prove by statistics that it is less dangerous to life than those operations I have mentioned, but they are sufficient to show that the operation is simple, effectual, and introduces no new danger, while it is obviously free from the sources of irritation common to other methods.

The section of the veins is completed at once; there is no foreign body liable to set up inflammation left in contact with the healing veins, which are allowed to remain at perfect rest, while their seared ends are becoming permanently closed. As you are aware, the closure of an open vessel by the hot wire or iron is usually considered a particularly safe plan. There is also no interference with the skin of the scrotum, as in Lee's operation; no compression of the scrotal vessels, no œdema.

The only other method that I should at all recommend to you is the use of the catgut ligature applied to the veins subcutaneously. I have had no experience in it, but it has been done with success. I think the heated wire is preferable, because the catgut ligature is rather uncertain in its action; it may soften very rapidly and then fail to occlude the vessels, or it may not soften at all and cut its way through the veins like an ordinary hempen or silk thread, or remain and subsequently light up inflammation. These accidents are only occasional, but we should none the less be on our guard against them, and give the preference to a plan of treatment which is free from them. In none of my eight cases has any slough separated from the veins; the eschar formed has been absorbed by the living tissues. I show you to-day four cases at varying periods after the operation illustrating their progress.

1. W. J., aged seventeen, a large left varicocele, which he had noticed for "several years," left testicle smaller than right, complained of dragging pains in scrotum and up to left loin. Operation, June 21, 1879; left hospital June 28th. A firm induration the size of a marble felt; not tender; veins below plugged.

2. F. L., aged twenty-four, single, injured left testicle five years ago; first noticed varicocele three years ago, after an attack of clap, since then the pain and swelling had steadily increased in spite of wearing a suspender. No constipation; external piles for two years. Operation May 28th; left hospital June 8th. The induration is very hard, the size of a horse bean; veins below are firm and shrinking.

3. W. C., aged thirty, single, very large left varicocele, noticed suddenly in June, 1879, while bathing. Pain in scrotum and groin had increased of late; testicle smaller than right. Operation May 1st; left hospital May 7th; delayed on account of a slough of skin. Induration now small; veins below cannot be felt; testicle has regained its former size and is a little larger than right.

4. W. S., twenty-one, a small varicocele noticed some years; scrotum not lax; considerable pain; frequent seminal emissions and mental depression. Operation Sept. 29th; left hospital Oct. 9th. No trace of dilated veins or of the seat of the operation to be felt. All symptoms relieved.—*Lancet*, July 17, 1880.

Hospital Notes.

A Case in which One-third of the Cranium was Denuded by an Injury; recovery in fifteen days.

Eliza H——, a machinist, aged twenty-three years, was admitted into the Great Northern Hospital, under the care of Mr. SPENCER WATSON, on Feb. 5th, at 8 P. M., having thrown herself from a second-floor window (a height of about thirty feet) to escape from a fire. She seemed to have lost consciousness in the act of falling, but thought that she fell upon the body of another girl who had also precipitated herself from the same window. The whole of the posterior third of the scalp, from a line extending from the mastoid process on one side to the corresponding part on the other across the top of the head, was detached from the skull and hanging loose on the nape of the neck. It was reapplied, and the edges of the wound brought together by hare-lip pins and strapping, and carbolized oil lint applied as a dressing; the hair of the head was previously cut off close to the scalp. She passed a quiet night, the temperature next morning being 99° and the pulse 96.

On Feb. 10th she was restless during the night, and had great pain in the head. Temperature 102.6°; pulse 120. The dressings were removed and the hare-lip pins taken out. The whole of the scalp felt "boggy," but there was no distinct fluctuation. The face was puffed and œdematous. Charcoal and linseed poultices were applied, perchloride of iron was given in ten minim doses, and a calomel purge was administered. Next day the temperature was 98.6°, and the girl felt altogether better.

After this date the recovery was only interrupted by a small collection of pus under the scalp at one limited spot; it discharged itself, however, through the original wound, and by Feb. 20th the latter had almost healed. On the 6th of March the wound had completely healed.

Remarks.—The rapid recovery from such an extensive denudation of the cranium is the most interesting feature of this case. The young woman's very good general health must be taken into account, as giving her the best chance of recovery, but the antiseptic dressings must be credited with some part of the good result, and the absence of serious complications.—*Lancet*, June 26, 1880.

MONTHLY ABSTRACT.

Anatomy and Physiology.

Origin of Blood-corpuscles.

A memoir by POUCHET which has recently appeared in the *Revue Scientifique* (and which has been translated in the current number of the *Quarterly Journal of Microscopical Science*), discusses the interesting subject of the mode of production of the red blood-corpuscles. It is not a little remarkable that the origin of the formed elements of the blood should still continue to be a matter of hypothesis, and that physiology is incapable of replying to the question, How after large losses of blood is its restoration effected? The present generation of practitioners are hardly aware of the quantity of blood that was taken from patients in acute disease by the physicians and surgeons of the past age. If works written in the early part of the present century are referred to, some surprising facts of this nature will be found. At the time when Sir W. Lawrence's treatise on the Venereal Diseases of the Eye was published—that is, in 1830—bleeding was the approved method of treating gonorrhœal ophthalmia; and amongst other cases he records in that work there is one of a pugilist, who was no doubt an athletic, freely living man, but who, having contracted gonorrhœal ophthalmia, was admitted into St. Bartholomew's Hospital, and from whom the surprising quantity of one hundred and fifty-two ounces, or nearly eight pints, reckoning twenty ounces to the pint, were abstracted by venesection, besides the application of thirty-two leeches, in the short space of one week. Nor was this a solitary case, for several others are recorded in which nearly equal amounts were taken. It is worth noting that the pugilist recovered with perfect vision. In the case of women, again, enormous losses of blood are often sustained in menorrhagia, which are yet quickly restored under favourable circumstances. Rindfleisch has made an estimate of the rapidity with which the reproduction of new corpuscles must take place in ordinary intermenstrual periods, and calculates that half a centigramme of blood is produced every minute, which means that about one hundred and seventy-five millions of red blood-corpuscles are produced every minute. When thus reduced to figures, it seems extraordinary that no answer can be given to the questions how and where this enormous proliferation is effected.

Is the process of renewal performed in some obscure organ whose function has been overlooked—the suprarenal capsules or thymus or thyroid gland, for example,—or is it that the corpuscles, similar as they may all appear to our methods of investigation, are derived from many different sources, each set having its own special and definite functions, and differing in structure, purpose, and destination from all the rest? The results of modern physiological research seem to point in the latter direction. Not many years ago the corpuscles were believed to be exclusively derived from the chyle, and Hewson's observations, to which Mr. Gulliver did good service in calling attention, were essentially in favour of the mesenteric glands being the bed for the production of the lymph corpuscles, the nuclei of which acquired colour and became the red corpuscles. More recently, however, the claims of many other parts of the body to be hæmatopoietic organs have been with more or less probability advanced, and the share of the spleen, the liver, the muscles, the cancellous tissue of the bones, and the peritoneum, in

the process of blood formation, has been urged by different experimenters. Objections may, however, be raised to nearly every hypothesis that attributes the origin of the hæmatids to a single source. Even in the case of the lymphatic glands it may fairly be urged that they cannot be exclusively concerned in the generation of the red corpuscles, since such glands are wholly absent in fishes; and the same objection may be taken to the view of Neumann and Bizzozero in favour of the cancellous tissue of the bones. And granting even that they are formed here, by what means do they traverse the walls of the capillaries, and how are they impelled into the current of the circulation? The fact that the spleen is absent in some animals, as the lamprey, and may be removed even in the higher animals and man without rendering them anæmic, disposes of the idea that it does more than aid in the genesis of blood-corpuscles, and, as Pouchet remarks, little weight can be attached to the statements that a new function can be vicariously performed by other organs of a totally different structure.

In regard to the derivation of hæmatids from the lymphoid patches of the mesentery, these regions can evidently play but a small part in the production of new corpuscles. Ranvier has indeed observed hæmatids originating in the midst of vessel-forming tissue. But if this view be correct, the repair of lost blood would be necessarily associated with the production of new capillaries, which has not been demonstrated. The view which is held by M. Pouchet himself, that the real origin of the blood-corpuscles is to be looked for in the hæmatoblasts or minuter form of globules, has been described by Hayem, and long before him by Donné, under the name of globulins. These bodies probably originate in the blood plasma, being primarily formed of albumen, to which subsequently the crystalline substance hæmoglobin is added, causing a great increase in the volume of the globulets. In the blood of animals undergoing repair after large hemorrhages, an extraordinary number of hæmatoblasts or globulets may be observed. These rapidly enlarge in all directions, lose their granular aspect, and become hyaline, and finally assume the discoid form and the yellowish tint of the full-formed corpuscle. The hæmatids are on this view neither cells nor the descendants of cells, but may, like Topsy, be said to have simply "growed." It would seem that the generation of the red corpuscles is still a dark corner in physiology, and some further observations are still requisite.—*Lancet*, July 31, 1880.

—

The Presence of Bile in the Lymph and Blood when diverted from its natural channels of Elimination.

Fleichl was the first to upset the opinion generally accepted up to his time—that whenever any obstruction whatsoever in the bile duct prevented the elimination of the bile by its proper channels, it immediately made its way into the blood in the substance of the liver itself. After ligature of the bile duct, he found the biliary acids to be present in the thoracic duct before he could detect them in the blood; hence he inferred that the bile made its way into the blood, not directly, but through the lymphatic system. Kufferath has verified and extended these views. First he repeated Fleichl's experiments. In eight dogs he tied the bile duct and collected the lymph as it flowed from the thoracic duct. In each case he found the biliary acids present. In two cases only were these acids found in the blood, and in these a post-mortem examination showed that a bifurcating branch of the thoracic duct had escaped ligature. In his second set of experiments, he tied both the biliary duct and the thoracic duct. Three hours afterwards he analyzed the blood. In three out of four cases there was no trace of the hepatic secretion in the blood. In the fourth case, where such was detected, the autopsy showed a second thoracic duct which was unligatured. Hence,

he concluded that as there are no biliary acids in the blood three hours after the simultaneous ligature of the bile and thoracic ducts, therefore the bile enters into the blood *exclusively* through the lymphatic vessels. The lymphatics in the liver are stained yellow, so that it is not the biliary acids alone, but the bile itself, which takes this course.—*Dublin Med. Journal*, July, 1880, from *Journ. de Méd., de Chir., et de Pharm. de Bruxelle*, Juillet, 1879.

—

Indican in Health and Disease.

Dr. H. N. HEINEMAN, Assistant in the Laboratory of the Alumni Association of the College of Physicians and Surgeons, New York, contributes to the *Archives of Medicine*, August, 1880, an interesting paper on this subject, of which the following are his conclusions:—

Indican is only exceptionally absent in health. It may vary in quantity in the healthy individual, generally being small in amount, but occasionally as marked as in disease.

Certain diseased conditions tend to produce a decided increase.

The most marked increase is obtained in those diseases which affect the alimentary canal, and more especially the small intestines, whether they be local or general diseases with local lesion. Among these are dyspepsia, gastro-duodenitis, chronic constipation, intussusception, diarrhœa, peritonitis, cholera, lead poisoning, and typhoid fever.

In diseases causing inanition, as phthisis and other prolonged suppurative diseases, as caries and necrosis, marked increase is found.

Among the diseases producing altered blood states, some, such as malaria, syphilis, rheumatism and alcoholism, progressive anæmia and chlorosis, although *always* causing the most profound blood-changes, *do not always* effect a decided increase. This is a singular exception, to which Senator has called attention, but the investigations are not yet sufficiently numerous to draw conclusions.

Certain nervous disorders, as insanity, epilepsy, Addison's disease, progressive muscular atrophy, and paraplegia, cause marked increase.

Disordered function of the kidneys, as in chronic Bright's disease, causes marked increase.

Internal malignant tumors, as carcinomata and sarcomata, cause increase most markedly and constantly of all.

The explanation of the cause of the increase in various diseases is not as yet adequate to satisfy all cases.

—

On a Filaria reported to have come from a Man.

Prof. JOSEPH LEIDY describes (*Proceedings of Academy of Natural Sciences of Philadelphia*, March 2, 1880) a large thread-worm, which had been submitted to his examination by Dr. J. J. Woodward, U. S. A. It was recently presented to the Army Medical Museum, at Washington, by Dr. C. L. Garnett, of Buffalo, Putnam Co., West Virginia. Accompanying the specimen is the copy of a letter from Dr. Garnett to Dr. Woodward, from which the following is an abstract: "During the winter of 1876 a man, a common labourer, aged about fifty, presented himself to me for treatment, having a gleety discharge from the urethra, with a burning sensation during and after micturition. Previously he had been treated for gonorrhœa, and I prescribed accordingly. The patient not improving, applied to other practitioners. In April, 1878, he came to me with a round, vivid-red worm, twenty-six inches in length (the specimen you now possess) which was alive and very active in its movements, instantly coiling up like a watch-spring on being touched. Having no work on helminthology for reference,

the only description I found which appeared to answer to the worm was that of *Strongylus gigas*, in Niemeyer, vol. ii. p. 47. The patient is an illiterate man, with no motive for deception. He informed me that he discovered the worm protruding from his penis and drew it out without pain or difficulty. He was in much agitation and alarm about the occurrence, fearing, as he said, that "there might be more behind that one." For a few days previous to its passage, his urine was of a milky hue and some time subsequently of a yellow cast and slightly tinged with blood and mingled with mucus. The man is truthful, and no doubt exists in my mind or in the minds of his neighbours as to the correctness of his statements. I regret exceedingly that I did not appreciate the scientific interest of the subject, and send you the specimen in a fresh state, but the busy routine of a country practitioner's life leaves no time for the study of other than subjects of practical value in one's every-day experience."

The worm preserved in alcohol is much coiled, of a clay colour, and opaque, or only feebly translucent, but more so at the head end. If it is really a human parasite, it appears to differ from all those heretofore described, and also seems different from other known parasites. It certainly is neither *Eustrongylus gigas*, nor is it the Guinea-worm, *Filaria medinensis*, though nearly related to this. Its characters are as follows: Body long, restiform, nearly uniformly cylindrical, smooth, shining, elastic, tough, without evident annulation other than transverse wrinkling, with the anterior extremity evenly tapering in the continuous head, the end of which is rounded and smooth or without appendages of any kind; the posterior extremity not tapering, with the caudal end incurved, bluntly rounded, without appendages, and imperforate or without evident anal or genital aperture. Mouth a terminal pore without lips, papillæ, or armature of any kind. Pharynx cylindrical, and opening into a straight cylindrical intestine, apparently ending in a blind pouch. Generative organs unobserved. Length of worm, 26 inches; greatest thickness, 1.5 mm. Width of head just behind the rounded extremity, 0.375 mm.; opposite the commencement of the intestine, 0.625 mm.; at the middle, 1.5 mm.; at the incurved caudal extremity, 1.5 mm. Length of œsophagus, 1.125.

Fig. 1. Fig. 2.

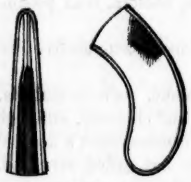

Fig. 1.—Cephalic extremity.

Fig. 2.—Caudal extremity; the diagonal marking indicates the crossing of the fibres seen in the integument. Five diameters.

The worm, of exceedingly simple character, is clearly neither a *Gordius* nor a *Mermis*, and, though apparently more nearly allied to *Filaria*, a more intimate knowledge of its structure may prove it to be different. For the present it was proposed to distinguish it with the name of FILARIA RESTIFORMIS.

Materia Medica and Therapeutics.

Recent Investigations on the Action of Drugs.

An interesting contribution to the facts relating to the antagonism between the actions of drugs has been supplied by PANTELEJEFF with regard to two drugs in common use—quinine and atropine. The salts employed were the chloride of quinine and the sulphate of atropine, and the experiments were made upon dogs, rabbits, and frogs. An injection of quinine beneath the skin of a frog in summer arrests the heart in diastole; but a subsequent subcutaneous

injection of atropine causes it at once to resume its pulsation. The appearance of the heart, when its action is arrested by quinine, is as if the blood-pressure on heart was greater than the cardiac walls could contract upon. If atropine was injected first, so as to cause an acceleration, this was arrested by the quinine. With winter frogs the effect of the quinine was more frequently to cause a gradual retardation in the action of the heart, which was only arrested, after a time, with loss of reflex action, and death. The injection of atropine did not prevent this, but retarded the heart still more. Microscopic examination of the vessels of the web of the foot showed that the quinine caused a narrowing of the small arteries to one-half of their previous calibre, while atropine dilated the vessels. In rabbits it was found that when the heart's action was arrested by quinine, atropine caused it again to beat, and the auricles began to contract before the ventricles. In both dogs and rabbits the blood-pressure in the carotid rose after the injection of quinine, when the pulse was rendered less frequent. It was found that immediately after the injection the blood-pressure suddenly falls, but after a few seconds it rises to a higher degree than before the injection. In small doses the pulse is often accelerated during the increased pressure, but with large doses the pulse is retarded from the beginning. If repeated injections are made, every injection causes first a sudden fall of pressure, with retardation of the pulse; then the pressure rises, to fall again after a new injection. This initial fall in the blood-pressure is probably due to a sudden contraction of the vessels of the lungs, hindering the passage of the blood into the left ventricle and the aorta. The cardiac contractions become at the same time less frequent, but stronger. The arteries of the aortic system then contract, and cause an increase in the blood-pressure, and at the same time an acceleration of the pulse. Large doses have a direct influence on the heart, so that, later, the cardiac action becomes retarded, and the blood-pressure falls. The pneumogastrics remain excitable by electricity, but their division exercises no marked influence upon the pulse, especially when the respiration is retarded by the action of quinine. Subsequent injection of atropine accelerates the pulse, even when the pneumogastrics have been divided. In only one observation upon dogs was an arrest of the heart by quinine prevented by atropine. The increase of pressure caused by quinine was disturbed and retarded by the preceding injection of atropine. Direct application to the heart of frogs showed that not only can quinine arrest the action of the heart, but that it can also, under certain circumstances, act as a stimulant to excite it to action, and the effect depends upon the condition in which it is.

The acute effects produced by large doses of atropine have often been studied, but the symptoms which are produced by such doses as are toxic only when long continued have been little investigated. They have, however, lately occupied the attention of Dr. von Anrep in the physiological laboratory of Würzburg. If a dose of one to three milligrammes is administered to a dog by hypodermic injection, the slight symptoms which it causes—mydriasis, etc.—soon pass away. If the injection, however, is repeated, the effects gradually become less intense. After the fifth injection the slight modifications of the cutaneous sensibility and the slight muscular tremors which are caused by the first doses cease to occur, the slight acceleration of the action of the heart is less marked, and the animal maintains its usual health in spite of the continued doses. Chronic poisoning with larger doses gives more persistent results. A single dose of one-twentieth of a gramme causes symptoms of acute poisoning—muscular spasm, vomiting, thirst, and loss of appetite, transient acceleration of the pulse, extreme dilatation of the pupil, quickened respiration, and a slight elevation of temperature. If this dose is repeated on six or ten successive days the symptoms become slighter after each injection, with the exception of the dilatation of the pupil, the accele-

ration of the action of the heart, and the diminution in the saliva. There is no trace of muscular spasm or tremor. After a long time the heart becomes weakened, its contractions are less frequent, being only one-half of the normal, and the effect of each new dose is to cause only a slight acceleration. From these experiments it appears that a remarkable tolerance is established to the alkaloid, even in considerable doses, so that after a time the animals are unaffected by doses which would have been fatal at the outset of the experiments; but this tolerance is least in the case of those organs and structures which are normally the most impressionable—namely, the pupil and the pneumogastric nerve. If, after several weeks' poisoning, the administration is stopped, the heart returns to the normal condition in from three to five days. It is suggested that the *modus operandi* of atropine on the heart is as follows: The first doses act exclusively upon the pneumogastrics; the excito-motor ganglia and the muscular tissue of the heart resist the action of the poison, and are only affected by repeated doses: hence the persistence of the retardation which succeeds the initial acceleration.

The same investigator has studied the action of cocaine, the active principle of the cocoa-leaves. He draws the conclusion that cold-blooded animals are more sensitive to its action than warm-blooded animals. Its chief action appears to be upon the nerve-centres. In frogs, it first paralyzes the terminations of the sensitive nerves, and afterwards abolishes reflex action. In the mammalia, it first stimulates all the nerve-centres, and especially the psycho-motor centres. This general excitation is followed by a slight enfeeblement. Small doses increase reflex action; large doses do not paralyze it entirely, as in the case of the frog. Respiration is quickened, except by fatal doses. In frogs the power of the heart is lessened, so as to lead to arrest in diastole. In mammalia the heart's action is accelerated, and strong doses are necessary to cause a retardation. The blood-pressure is increased by the stimulation of the vaso-motor centres; large doses should naturally have the opposite action, and lower the blood-pressure. The inhibitory nerves of the heart are readily paralyzed by medium doses. The striated muscles are not directly influenced by cocaine. The pupil is dilated by it, and as powerfully by the internal use of the drug as by its instillation into the eye. The peristaltic movements of the intestine are accelerated. Acute poisoning by cocaine causes muscular spasms, and, in consequence, an elevation of the rectal temperature; when there are no convulsions the rectal temperature falls. The secretion of the several mucous membranes is lessened. Certain motor disturbances can only be explained by the assumption that cocaine has an action upon the semicircular canals; the symptoms suggest that the drug modifies the pressure of the endolymph in the internal ear, and thus effects a stimulation of the terminal filaments of the auditory nerve. Death appears to result from asphyxia, caused by respiratory paralysis, the heart continuing to beat for some minutes after apparent death.

The action of cyanogen has been the subject of an experimental study by R. Bunge, at Dorpadt, with frogs. He was unable to observe any convulsive phenomena, and the paralyzing effect was produced slowly, even with large doses. If the animals were examined after a few minutes' exposure to the action of the gas, the cutaneous sensibility was found to be lessened or abolished, and their movements were considerably lessened. During the first few minutes of the exposure the animals were restless from the local irritation, their movements then became slower and less frequent, the respiratory and cardiac action ceased, and rigor mortis set in with great rapidity. The latter, indeed, sometimes commenced in the hind legs while respiration was still going on. Post-mortem examination showed the heart to be dilated and filled with pale blood, in which the spectroscope revealed the absorption bands of oxyhæmoglobin. If the blood-

supply to a limb was cut off, the rigor mortis appeared in those muscles somewhat later than elsewhere. If, however, a limb was entirely separated and exposed to the action of cyanogen gas, the cadaveric rigidity rapidly appeared in it. If the heart was exposed, the ventricular contractions were seen to become less frequent and more feeble, and the irritability of the cardiac muscle to mechanical stimuli was soon lost. This was, however, preceded by a transient acceleration of the frequency of the heart's action, which the experimenter refers to stimulation of the cardiac ganglia, or muscle substance. That it is not due to any action on the vagi is shown by the fact that, if muscarin is first applied so as to arrest the action of the heart, the stimulating effect of the cyanogen can still be observed. The chief difference between the action of cyanogen and hydrocyanic acid consists in the persistence of the respiratory movements after the heart's action has ceased, and in the early occurrence of the rigor mortis. In the mammalia, cats, rabbits, and mice, the cyanogen gas, whether inhaled or injected in watery solution into the blood, causes dyspnœa, and the animals die from respiratory paralysis, just as after poisoning with hydrocyanic acid. The blood-pressure falls, and the heart's contractions are at first rendered more frequent, but in the later stage are retarded. They continue after respiration has ceased. The toxic effect of cyanogen is less violent than that of hydrocyanic acid, .02 grm. being required to produce the same effect as .004 grm. of the latter.—*Lancet*, July 31, 1880.

—

Therapeutic Uses of Pilocarpin.

PICK (*Vierteljahres. für Derm. und Syph.*, 1880, Heft 1) has made a trial of pilocarpin in various forms of skin diseases. In most cases, a dose of one centigramme given internally twice daily stimulated first the secretion of saliva, and four or five minutes later that of sweat. In all the cases in which decided effects were produced, the action became less powerful after three or four weeks, so that, in order to secure continuance of effect, the dose had to be increased. If it were discontinued altogether for eight days, the same dose, on being again given, produced the original effects. When pilocarpin had been taken for some time, the skin became softer and more yielding, and the sebaceous secretion more abundant. No ill effects were observed. In prurigo (Hebra) it stimulated the secretion of sweat on the affected skin after a few weeks, and speedily alleviated the disease. In periods varying from 48 to 105 days the skin became healthy. Relapses supervened, but the diseased condition was not so intense as that previously existing, and was speedily relieved by the renewed exhibition of the drug. Against psoriasis, even in doubled doses, it proves valueless. In the acute stage of eczema it was injurious. In the chronic stage, with infiltration, it was, on the contrary, beneficial. Three cases of hemorrhoidal eczema were cured by it after they had resisted other treatment for years. Two cases of pruritus senilis were cured by it; in one it failed; in a case of pruritus vulvæ, following delivery, recovery was complete in three weeks. Recovery also followed its use in urticaria chronica. Encouragingly, but less decisively, the author speaks of its use in alopecia with pityriasis.—*London Med. Record*, July 15, 1880.

—

Method of Masking the Odour of Iodoform.

Tannin, which was recommended by Moleschott as a means of hiding the unpleasant smell of iodoform has not been wholly successful. Ether, which conceals the odour, on account of its great volatility is only useful for a short time, whilst oil of peppermint has not answered its expectations. Dr. LINDEMANN of Münster contributes to the *Allg. Med. Centralzeitung* an account of experi-

ments which he has made with several preparations in regard to this subject. The conclusion at which he has arrived is that the balsam of Peru completely masks the smell of iodoform, and renders it imperceptible to the most delicately organized. He mixes two parts of the balsam with one part of iodoform, and recommends vaselin as being the best medium for an unguent; it may also be employed in an aqueous solution. The following useful formulæ are subjoined: R. Iodoform. 1 gram., bals. peruv. 2 gram., vaselin. 8 gram. M. f. ungt. R. Iodoform. 1 gram., bals. peruv. 3 gram., spir. vin. rectif. or glycerin. 12 gram. In regard to the preparation of these prescriptions, the author recommends that the iodoform should first be mixed with the balsam, and that the vehicle should afterwards be added.—*Practitioner*, July, 1880, from *Schweiz. Correspbl.* 20, 1879.

The Use of Quinia in Connection with Nervous Sedatives.

At the late meeting of the American Neurological Association Dr. LANDON CARTER GRAY, of Brooklyn, reported that great relief was to be expected from the bromides in robust patients; but not to the same extent in the case of the weak and anæmic. His own experience had convinced him that there was considerable danger in using them freely in certain instances, and he had met with one case in which a fatal result was thus produced. He was a firm believer in their efficacy in epilepsy, as a general rule; but at the same time he felt that under some circumstances they should be used, if at all, only with extreme caution. For the past two years he had been in the habit of prescribing quinine in connection with the bromides, and he could but express himself as more than satisfied with the results obtained by this combination. At first he had employed it with timidity and in very small doses, as he feared, from what he had been taught, that it might perhaps interfere with their action, and only aggravate the trouble present; but afterwards he had used it much more freely, and always with very beneficial effects. His practice now was to give first a sufficient quantity of the bromides to produce bromism, and then two or three grains of quinine three times a day in addition. He had met with a few cases in which quinine was not well tolerated, but as a rule such patients were able to stand the full sedation of the bromides; while in some instances he had deemed it advisable to stimulate the system with the quinine before commencing the use of the bromides, on account of the weak condition of the patient. All his experience went to show that quinine actually increased the effect of the bromides, hyoscyamin, and belladonna, and he had also found that all these agents were much better borne by the system, as well as more efficient in their action, when administered in combination with quinine than when the latter was omitted.

The happy effect of the quinine with hyoscyamin was well shown in a case of puerperal mania which he had seen in consultation. When hyoscyamin was given alone it seemed to be of no service; but when quinine was added to it, although there was no malarial complication in the case, its use was followed by the most happy results.—*Bost. Med. and Surg. Journ.*, July 8, 1880.

Medicine.

Tuberculosis as an Infectious Disease.

Dr. L. G. BRYHN (*Norsk Magaz. für Lägevidensk* and *Nordiskt Mediciniskt Arkiv*, Band xii.) relates some cases in proof of the infectious character of pulmonary tuberculosis, of which he has become convinced by observations made

during a practice of thirty years' duration. A phthisical man married a woman of healthy family; the man died, the woman became phthisical, as did also her sister, who resided in the house during the man's illness. The latter married a man of great strength, of sound family; he, too, was attacked, and also his sister's daughter, who resided some time in the house. One of their children died of tubercular meningitis, two had signs of pulmonary tubercle, one was free. The girl who served the first man's wife became tuberculous, went home, and died. Her sister was infected by her; both their parents had lived to a great age, and tuberculosis had never before shown itself in the family.—*Lond. Med. Record*, July 15, 1880.

—

The Transmissibility of Tuberculosis by Milk.

M. PUECH having recognized the existence of phthisis in a cow which was sold for killing, and yet continued to yield three or four litres of milk daily, fed with the milk two sucking pigs and two rabbits. He has communicated the following results to the Académie des Sciences. The animals, when killed, showed tuberculous lesions in strict proportion to the length of time the milk had been administered. These facts, according to M. Puech, show that phthisis is transmissible by milk direct from the cow. It remains to be determined whether this liquid loses its contagious properties when it is boiled. M. Bouley afterwards submitted to the Academy a jar containing fragments of the lung, liver, spleen, the phrenic centre of the diaphragm, and the bronchial and submaxillary glands of a pig, five months old, killed sixty-seven days after an inoculation of two cubic centimetres of meat juice, pressed with an hydraulic press out of a fragment of the ischio-tibial muscles of the tuberculous cow mentioned in M. Puech's note. This experiment was made at Toulouse by M. Toussaint of the Veterinary College. Examination of the fragments in the jar showed tuberculous lesions in a very advanced condition. M. Bouley said that these facts, which demonstrate beyond doubt the transmission of tuberculosis from the cow by the alimentary use of unboiled milk and the inoculation of the juice of uncooked meat, should not pass unnoted. In addition, they are not unique, since in Germany, experiments of the same kind have been made, and have yielded identical results, to which, however, it does not appear that sufficient importance has been attached. The danger is, according to M. Bouley, indubitably a real one; and it is well that the public should be warned of it, so that they may take proper precautions, especially as the use of raw meat is now often prescribed as a remedy for anæmic disorders. The outcome of these facts is, that inspection in regard to phthisis occurring in cows should be extremely strict in the slaughter-houses, and that it would be prudent to make use of boiled milk, especially for the feeding of infants, when the source whence it is derived is not beyond suspicion. Cooking, which destroys cellular and parasitic life, should render both milk and meat harmless.—*Brit. Med. Journal*, July 31, 1880.

—

Treatment of Infantile Paralysis.

DALLY, in this exceedingly able and instructive paper (*Journal de Thérapeutique*, March 10th), prefaces his remarks by a definition of the disease and a description of the present views as to its morbid anatomy. This he does, since great misapprehension has existed by confounding several very different diseases, some curable, others not, under the title of infantile paralysis, and thereby he makes it quite clear to what ailment he refers. The essential paralysis of children is clinically characterized by a sudden onset without prodromata, generally feverishness and of short duration; paralysis rapidly supervenes, and, in twelve or twenty-four hours, is usually complete. After the first week movements re-

appear here and there, but often some limbs or some scattered muscles remain paralyzed and atrophied, such paralysis becoming the cause of very various deformities. Dr. Dally quotes from M. Buchheim's article on the spinal cord in the *Dictionnaire Encyclopédique des Sciences Médicales*, the description of the morbid anatomy of this affection. Referring to the various observations of Laborde, Cornil, Prevost, Vulpian, Lockhart Clarke, Charcot, Geoffrey, Roger, Damaschino, Parrot, and Jeffrey, extending from 1861 to 1871, he proceeds to sum up the results as being sclerosis, or simple atrophy of the antero-lateral columns of the cord, and granular disintegration of the large cells in the anterior cornea, the latter being a constant lesion The question as to whether the degeneration of the nerve-cells is secondary to the pressure caused by sclerosis of the spinal cord, or whether the atrophy of the nerve-elements is primary, he leaves unanswered; indicating that Charcot and Vulpian support the latter view, as Roger and Damaschino incline towards the former. The sudden onset, the diminished faradaic contractility, and the rapid muscular atrophy, all point to a primary affection of the nerve-cells, which alone may be sometimes found affected. Speaking of the cause of the disease, Dr. Dally points out that no diathesis, or hereditary predisposition, nor the usual accompaniments of growth, will account for it, but refers to a case that came within his own knowledge, and which he has previously placed on record, of three children in one family who were attacked, two in one day, and the other within twenty-four hours, that almost justified the suspicion of some poison being the cause. The cases were seen by Trousseau, Duchenne, and others, and no doubt as to the nature of the malady existed. Coming to the main purport of the paper, the writer, following Laborde and Duchenne, divides the treatment into three periods: 1. That for the acute phenomena of the onset; 2. For the paralysis and atrophy; 3. For the subsequent deformities. In respect to the first stage, Dr. Dally confesses to having had no experience of it; but assuming that a stage of vascular congestion precedes the destructive state, he agrees with the treatment recommended by Duchenne, Laborde, Simon, and Bouchut, and which may be summed up as means for withdrawing the blood from the vertebral region by the ventral decubitus, manipulation, sinapisms, etc., to the calf, and intestinal derivatives, especially calomel. The diet should be milk. Following the recommendation of Bouchut to employ the constant current, as Duchenne recommends the faradaic, he would only wait for the cessation of the fever to apply them to the affected muscles. The second period is essentially that of repair, spontaneously in the greater number of cases the disease limits itself when it is not completely cured. The problem is to prevent the sclerosis of the antero-lateral columns, which is secondary to the affection of the nerve-cells. Duchenne states that the application of local faradization at the commencement of the paralysis would cut short the duration of the paralysis, diminish, if not prevent, the atrophy of the muscles, and, perhaps, prevent their fatty degeneration. Keeping this dictum in view, Dr. Dally followed out the treatment in a dozen cases over periods of three weeks to three years with almost always the same results, viz., the re-establishing to a degree of the locomotive power, the prevention of deformities, and the arrest of the progressive atrophy. In one case, a perfect cure followed a complete paralysis, though the atrophy was less marked than usual. A further advantage is the prevention of atrophy of the bones, whereby, should the muscles eventually recover, the deformity of the limb is prevented. It is in reference to the treatment of the subsequent deformities that Dr. Dally makes some valuable remarks. He is rightly very severe upon the assertion too often made, that "the case will improve with age," a remark that, "however consoling it may be for the moment, is terribly false." "No improvement," he goes on to say, "follows age, nor the appear-

ance of the menses, nor the changes of the moon, unless a happy chance or science interfere." He regards, also, as a most serious error, the indiscriminate use of gymnastics and exercise, as is often advised, since the deformity is due to the disturbance of the normal antagonism of the muscles of the limb one against the other by the paralysis of certain of them, leaving the others to exert their full force unneutralized. By exercise and gymnastics, this want of equilibrium is intensified and the deformity increased; since it is the healthy muscles alone that can participate in the exercise, the more they are developed by use the more do they deform the limb. The first rule, therefore, when inequalities in the limbs exist, is to supply the deficiencies by mechanical means; and the second is to limit the exercise and galvanism to the muscle or group of muscles which are paralyzed. The application of this rule will obviously vary with the part affected. Exercise is only applicable to those muscles which retain some contractility, and may be applied by directing the patient to perform the movement as far as he is able, resistance to such movement being made by the practitioner; or the latter may himself perform the movement of the limb, the patient being told to oppose such action as much as he can. The writer insists upon the persistent employment of the remedies, and warns against the expectation of rapid improvement, and compares the gradual advance made to the growth of the intellect by education. Galvanism the author regards as of most value for its direct and indirect trophic action, not so much on the separate organs as on the whole region. How far it alone is of value, he cannot say, since he has always employed it in conjunction with other remedies.—*London Med. Record*, July 15, 1880.

—

Secondary Degeneration of the Spinal Cord.

Amongst the contributions continually being made to the science of medicine, not the least important are the courses of lectures annually delivered by Professor CHARCOT at Paris, and uniformly published in the *Progrès Médical*. Of these there are two series: one being given at the École de Médecine by Dr. Charcot in his capacity of Professor of Pathological Anatomy to the Faculty; the other at the Hospice de la Salpêtrière in his capacity of Physician to that institution; and whether he be treating essentially of the anatomical side of disease, as in the former course, or of the clinical, as in the latter, Professor Charcot generally succeeds in introducing new and striking observations into his teaching, and in rendering his lectures interesting and suggestive, not only for his immediate audience, but also for the profession at large. The plan which M. Charcot adopts for his systematic course at the École de Médecine is each year to select some one branch of pathology, and to follow it up closely, rather than to extend his range over a wider area at the cost of thoroughness; and last year his choice fell upon the pathological anatomy of the so-called "systematic" lesions of the spinal cord. By the term "systematic" he means those lesions which, though extending throughout the greater part of the length of the cord, confine themselves more or less accurately to one region in its transverse section. Ever since careful microscopical examinations of diseased spinal cords have been made, it has been recognized that there is a strong tendency for morbid conditions to affect it in a curiously partial manner; that a lesion of one of the white columns, or of one horn of gray matter, tends to spread, not by involving the neighbouring white substance of other columns or other contiguous regions of gray matter, but by advancing along the column or horn of gray matter first attacked, until perhaps this portion of the cord is more or less affected throughout the whole of its extent. Familiar instances of this fact are to be found in the affection of the posterior columns seen in cases of locomotor ataxy, and of the anterior horns in infantile paralysis and progressive muscular atrophy.

This regional circumscription of morbid processes in the spinal cord is of great interest, not only from the pathological but from the physiological point of view. As was remarked by Professor Charcot at the commencement of his course, the study of the normal cord had done comparatively little to aid physiologists in elucidating the problems relating to its functions. The landmarks by which anatomists could divide it into separate regions are too few to be of much practical service; collections of nerve-fibres having widely different functions are tied together into a compact whole incapable of anatomical subdivision; and the organ is too small and too sensitive to allow of anything more than rough experiments being made by physiologists. Owing, however, to the tendency of various diseases of the spinal cord to pick out certain functional regions and to confine themselves mainly to these regions, it has become possible to arrive at much more accurate conclusions regarding the functions of different parts of the cord than had previously been the case; and there can be no doubt that the next few years will result in the discovery of many new facts to add to those which have already come to light.

One of the most interesting facts to which Professor Charcot called special attention in his lectures, was the existence of certain bundles of fibres in the antero-lateral columns, which are peculiarly liable to undergo secondary degeneration in connection with lesions involving the motor regions of the cerebral hemispheres. This secondary degeneration is seen in many cases of old-standing hemiplegia, and it affects two separate tracts situated on opposite sides of the spinal cord; for instance, a patient, who has suffered from left hemiplegia, the result of some lesion in the motor tract of the right cerebral hemisphere, will be found to have secondary degeneration of a band of fibres in the right half of the spinal cord forming part of the antero-lateral column, and lying close to the anterior median fissure; and of another band of fibres in the left half of the cord, also forming part of the antero-lateral column, but situated in its posterior part. These bands are known as the "direct" and the "crossed pyramidal tracts" respectively. They differ from other portions of the white matter of the spinal cord, in being directly connected with the surface of the brain. This connection has been proved in two ways; first, by the fact that at the time of birth, when the rest of the spinal cord has arrived at a high degree of development, but the brain is still in a comparatively early stage, these particular bundles in the cord correspond strictly in their degree of development to that seen in the brain; they have not arrived at their proper relative size, and the nerve-fibres of which they are composed have not yet received their sheath of medullary substance. The second proof lies in the onset of the secondary degeneration above described. In both instances it is possible to trace the course of these fibres with fair accuracy. After passing up the cord to the medulla oblongata, they form the anterior pyramid of the body, the "crossed" band by its decussation giving rise to the well-known decussation of the anterior pyramids; thence they can be traced through the pons Varolii and crus cerebri to the posterior half of the internal capsule, by which they pass to the motor region of the cortex in the neighbourhood of the fissure of Rolando. They thus constitute a series of commissural fibres passing directly from the surface of the brain to the spinal cord, without communicating in their passage with any of the large ganglionic masses at the base of the brain. Any lesion of the brain which affects either those portions of the cortex from which they arise, or those portions of the internal capsule, of the crus cerebri, or of the pons in which they lie, will give rise to secondary degeneration of these tracts. On the other hand, no lesion of the large ganglia, of the anterior half of the internal capsule, or of any other portion of the cortex than that near the fissure of Rolando, will cause any change in these tracts.

The central origin and the course of the fibres composing the pyramidal tracts having thus satisfactorily been determined, it still remains to trace them to their peripheral destination. This has proved less easy than the former task. Only two solutions were at all probable; the one being that the fibres pass straight into the anterior roots of the nerves, and the other that they pass into the gray matter and become directly connected with the cells of the anterior horns, which would thus act as intermediary agents between them and the nerve-roots. Two facts oppose the first hypothesis. In the first place, the anterior roots are at birth highly developed, at which period the pyramidal tracts, as before stated, are in an embryonic condition. This does not seem as though the two sets of fibres can be directly continuous. In the second place, in cases where degeneration has become exceedingly marked in the pyramidal tracts, it is very rare to find any degeneration of the anterior roots of the nerves. On the other hand, some recent observations made by Professor Charcot and others tend to prove the direct connection of the fibres of the pyramidal tract with the large cells of the anterior horns. It is a well-known fact that these cells maintain the nutrition of the muscles; and as these cells almost always remain healthy in cases of hemiplegia, it is very rare to find marked degeneration of the paralyzed muscles in such cases. In certain instances, however, Charcot has seen rapid wasting of muscles on the paralyzed side supervene in patients suffering from hemiplegia, and in whom the presence of secondary descending degeneration had been indicated by rigidity of the paralyzed limbs, the symptoms most commonly seen in such cases. In these instances, he has invariably found after death that the degeneration involved the anterior horns in addition to the usual pyramidal tracts; and though he has not found it easy in practice to trace degenerated fibres from the pyramidal tracts to the cells of the anterior horn, he feels justified in assuming that the connection exists, and that the cell-degeneration is directly due to an advance of the retrograde change from the pyramidal fibres. Thus it has been possible to trace a fasciculus of nerve-fibres from its central connection with the cortex of the brain to its peripheral distribution in the muscles.

There is one other point of interest to which Professor Charcot called attention in connection with the pyramidal tracts. It has long been known that only a portion of the fibres forming the anterior pyramid in the medulla oblongata decussate, though it has generally been found that by far the larger proportion of the fibres do so. Some little time ago, Flechsig, to whose researches much of the information contained in Professor Charcot's lectures is due, published a series of observations on the anterior medullary pyramids. He ascertained that the decussation is liable to great variations, and he grouped these variations into three chief types. In the first type, there is a partial decussation, presenting the same characters on the two sides. In the great majority of cases the band of decussating fibres is very much larger than the band which does not decussate, generally in the proportion of ten or fifteen to one. But the proportion is very variable, and in extreme cases it is entirely reversed, only a very small proportion of fibres decussating. In the second type, a complete decussation takes place on both sides; whilst in the third type, there is partial decussation on one side and complete decussation on the other. To the wide variability in the amount of decussation seen in the case of the first type, we may trace the existence of those strange but well authenticated cases of hemiplegia in which the paralysis takes place on the same side as the lesion of the brain.

The change we have just described is a *descending* degeneration following a lesion higher in the cranio-spinal axis than the seat of degeneration. Professor Charcot devoted several lectures to the study of *ascending* degenerations; in other words, to those which occur in the spinal cord or its upward prolongation

as the result of lesions situated *below* the degenerated fasciculi. Space will not allow us to go fully into these changes; but it may be said briefly that two sets of fibres are liable to undergo this degeneration: 1. A thin band forming the extreme outer portion of the posterior half of the antero-lateral column, and known as the "direct cerebellar fasciculus;" 2. That portion of the posterior column which borders the posterior median fissure, and which forms the well-known posterior median column of Goll. There is, in addition, a degeneration of the rest of the posterior column for a short distance above the seat of the original lesion. These degenerations only result when the original lesion occupies the white matter of the cord; a simple lesion of its gray matter, as in infantile paralysis or progressive muscular atrophy, being wholly powerless to produce them. It would appear, however, that ascending degenerations of this kind may occur, not only as the result of lesions in the spinal cord itself, but of disease of the nerves after their exit from the cord. At present, the number of clinical observations in proof of this conjecture is very small indeed, but it will probably be found that, when the attention of the profession has been more widely drawn to this series of phenomena, the number of strictly authentic cases of this nature will be largely increased.

We have given but a mere outline of the subject of secondary degenerations of the spinal cord, but we think we have said enough to indicate the great importance that attaches to them in the elucidation of the problems relating to the anatomy and physiology of the cord. Many points still require to be cleared up, but the surest way of arriving at a further knowledge of the functions of its different parts, is to combine full and accurate clinical observation of cases where these functions are modified, with careful microscopical examination of the cord in such cases after death.—*British Med. Journal*, June 26, 1880.

—

Fatal Chorea.

Mr. Octavius Sturges has recently made a study (*Lancet*, July 17, 1880) of some statistics of fatal chorea and deduces the following conclusions:—

1. Chorea, regarded as a disease of itself fatal, belongs almost exclusively to puberty, and especially to female puberty; its immediate exciting cause having distinct reference, in many instances, to conditions of unusual sexual excitement.

2. Besides the operation of sexual causes mental disturbance has to be reckoned; not fright only, but worry, anxiety, and despondency also, while the force and influence of such impressions is to be seen in the course as well as in the origin of fatal chorea.

3. Acute rheumatism appears as a cause of fatal chorea in but a small proportion of cases; yet the association, infrequent as it is, is distinct and unquestionable.

4. Chorea in its fatal, no less than in its non-fatal forms, shows strong preference for the female sex at all ages. Children, however, very rarely die of it, and boys, practically speaking, never.

5. Mental excitement, in varying degree (although not amongst the symptoms of ordinary chorea), is met with in so large a proportion of its fatal examples that we are justified in regarding this occurrence as of bad augury.

6. "Vegetations," new or old, on the auricular surface of the mitral valves, with or without similar deposits on the aortic valves, and sometimes with pericarditis, are met with in the great majority of cases dying of, or with, or shortly after, chorea. This condition, however, does not, as a rule, contribute directly to the fatal issue; it is found equally amongst those that die *with* and those that die *of* chorea. In some of the most marked and typical cases of fatal chorea the valves of the heart have been found absolutely healthy.

7. There is no other morbid condition except that which concerns the heart, occurring with sufficient frequency or uniformity to be regarded as characteristic of fatal chorea.

—

On Nervous Phenomena of Gastric Origin.

At a late meeting of the Paris Academy of Sciences, M. LEVEN called particular attention to the gastric origin of a certain number of medullary and cerebral nervous phenomena, which have been frequently attributed either to hysteria or to hypochondria. Thus, in his opinion, neuralgia, dermalgia, muscular and articular hyperæsthesia of the left side, thought to be caused by hysteria, are, as a rule, irradiations from lesions of the stomach. In the same way hypochondria, which alienist physicians describe as a special neurosis, frequently results, either from a dilatation of the stomach or from another affection of that organ. In pursuance of the reigning opinion on the nature of these nervous phenomena, patients are treated by preparations of iron and quinine, which only aggravate the gastric troubles and dyspepsia. On the contrary, the affection of the stomach should be treated, and all the nervous irradiations will disappear with it. M. Brown-Séquard observed that it has long been known that all the organs, or, more correctly speaking, all the nerves of the diseased organs, might bring on hysteriform phenomena; but it is very certain that the stomach shows disorders which are secondary, and depend on the general hysteric affection. M. Leven did not deny the subordination of the stomach to general neurosis, but he laid great stress on the fact that every diseased organ induces special pathological reflexes.—*British Med. Journal*, July 3, 1880.

—

Acute Respiratory Paralysis of the Larynx.

Dr. PAUL KOCH (*Annales des Maladies de l'Oreille, du Larynx, etc.*, May, 1880) relates the following case. A girl, aged 7½ years, after one day's fever, suffered from a large and deep ulcer, surrounded by a zone of intense red on the left tonsil. The margins were excavated; the surface dirty yellow. Similar ulceration appeared on the opposite tonsil the same evening. During the night a hoarse cough and dyspnœa, increasing in intensity, announced an invasion of the larynx. The following morning the cough was croupy, the voice was unaffected, but there were great dyspnœa and well-marked stridor, both exclusively inspiratory. No laryngoscopic examination was made, but the author concludes that ulceration similar to that on the tonsils, had taken place on the retro-laryngeal mucous membrane, and that it had produced an œdematous infiltration of the dilators of the glottis, the dyspnœa being characteristic of paralysis of the posterior crico-arytenoid muscles. Under continued inhalation of a saturated solution of chlorate of potash, the dyspnœa rapidly disappeared.—*London Med. Record*, July 15, 1880.

—

Quebracho in Dyspnœa.

In an article on the treatment of asthma (*Brit. Med. Journal*, July 17, 1880) Dr. J. B. BERKART states that the liquid extract of quebracho has of late been largely employed in the treatment of asthma. As yet, there is no indication for its use, except the presence of dyspnœa. A teaspoonful, repeated, if necessary, at intervals of ten minutes, certainly relieves, as he has observed, the dyspnœa of phthisis, of pneumonia, of pleurisy, of emphysema, and of valvular lesions. It has failed of its effect, so far as he has seen, only in two cases of aortic disease; in the one, the patient had been for years accustomed to inhale nitrite of amyl almost every two hours: in the other there was complication with marked attacks

of stenocardia. The active principle of quebracho appears to be a gum-resin; but as to its mode of action nothing is known. Dr. Berkart has frequently noticed that after the administration of the drug, there is slight flush of the face, perspiration, and occasionally drowsiness; but there are no objective signs on the part of the heart and of the lungs sufficient to account for the relief.

—

Peculiar Disease of the Intestines.

Dr. HELWEG relates, in the *Hospitals-Tidende*, Series 2, Band vi. (abstract in *Nordiskt Mediciniskt Archiv*, Band xii.) the case of an insane peasant, aged 45, who had for many years suffered from constipation, pain in the abdomen, and swelling in the ileo-cæcal region. The symptoms came on when he was out of bed; they were relieved when he was lying down; and at last he was obliged to remain in bed continually. He had about every month an attack of disorder of the digestive organs, constipation or diarrhœa, which lasted about ten days. In May, 1878, an indolent tumour, feeling like a loop of intestine, and yielding a tympanitic sound on percussion, was detected in the right iliac fossa. On deep pressure, a sort of crepitation was felt in it; it sometimes suddenly disappeared when friction was made, and reappeared after an interval varying from a few minutes to a day. The patient died on December 21, 1878, with symptoms of meningitis at the base of the brain. At the necropsy, miliary tubercles were found in the pia mater, lungs, and liver. The upper part of the cæcum and the lower part of the colon were much distended with gas; then came two contracted portions of colon, separated by a distended portion of the bowel filled with gas; the portion of the intestine on the other side of the flexure of the colon was normal. In the first of the contracted portions of the colon, the mucous membrane formed a sponge-like tissue, the meshes of which and the intestinal space were filled with round scybala; in one place, there were two straight channels lying parallel with the proper lumen of the gut. In the other contracted portion, the mucous membrane was thickened, but not spongy. On microscopic examination, it was found to have the ordinary structure of intestinal mucous membrane.

—

Treatment of Parenchymatous Nephritis with Pilocarpine.

Dr. CORTEZO, in the *Siglo Medico* of June 6, 1880, reports three cases of parenchymatous nephritis treated by means of hypodermic injections of pilocarpine. The first case was that of a man, aged 30, somewhat addicted to alcoholic drinks, but whose medical history was otherwise good. On admission, all the symptoms of albuminuria, including well-marked retinal changes, were present. He was at first placed upon a strictly milk diet, but this treatment proving of little use, it was subsequently changed for hypodermic injections of pilocarpine. One centigramme of the alkaloid was used daily, or every alternate day, during a period of thirty days. At the end of this time no trace of albumen could be found in the patient's urine. The second case occurred in a man, aged 42, who, some years previously, had suffered from general motor paralysis, with partial loss of sensibility. This affection had been followed after a lapse of two years by well-marked symptoms of renal disease. The urine contained numerous hyaline casts, and albumen, to the amount of 4 grammes (1 drachm) to the litre. Hypodermic injections of 1 centigramme of pilocarpine were given during a period of twenty days, and then discontinued for ten days, during which interval all traces of albumen disappeared. The patient was discharged apparently in excellent health. The third case was that of a man, aged 42, whose urine had for some weeks presented traces of albumen. Œdema of the eyelids and of the lower extremities was present. The same quantity of the alkaloid was injected daily during four days, after which no albumen could be detected in the urine.—*London Med. Record*, July 15, 1880.

Pilocarpine in Uræmia.

M. BOEGEHOLD (in the *Deutsche Medicin. Wochenschrift*, No. 26, p. 331, 1879; and *Gazette Hebdomadaire*, January 30, 1880, p. 75) relates four cases of undoubted uræmia, in which pilocarpine was employed in the form of subcutaneous injection. The first case was one of a child 5 years old. Acute uræmia supervened during convalescence from scarlatina; 8 milligrammes of pilocarpine were injected, and the convulsions ceased. At the end of an hour she had regained consciousness. Another attack supervened at the end of a few days, which was cured by two similar injections. The injections were made regularly during twenty days, and the attacks were not renewed. Ten days later on, the albumen had disappeared, and the cure was complete. In the second case, a boy 12 years of age was attacked by uræmic convulsions during convalescence from scarlatina. Injections of 1 centigramme of pilocarpine put a stop to the convulsions at the end of six minutes in two different attacks. Cure was effected. In the third case, the injections stopped the convulsions, but death supervened during coma. In the fourth case, the patient was seven years old, and had chronic nephritis. The convulsions ceased under the influence of injections of pilocarpine, but the child succumbed to the progress of the disease. The results obtained by the author seem to indicate that pilocarpine may be an useful agent in combating one of the most alarming and dangerous symptoms, but its utility in relation to the disease itself is certainly doubtful. However, as it stops convulsions, it may perhaps be used with advantage in puerperal eclampsia; a point which merits attention.—*London Med. Record*, July 15, 1880.

Surgery.

Perfectly Bloodless Operation.

The bloodless method of operating recommended some years ago by ESMARCH, is opposed by many surgeons on account of the general oozing which is apt to occur after removal of the elastic tube. Esmarch describes here (*Verhandl. d. Deutschen Geselsch. f. Chirurg. Apl.* 1880) the latest practical modification of his mode of procedure, by means of which such oozing may be completely prevented. In amputations, the operation is performed in the usual way by the bloodless method; all vessels requiring ligature are then carefully sought out and tied, and the wound at once closed with catgut sutures; drainage tubes, capable of being absorbed, are introduced, and Neuber's permanent compressing dressing applied. Then, and not till then, is the elastic tube removed from the limb. After the patient is placed in bed, he should keep the stump up in the vertical position for at least half an hour. [Neuber's permanent dressing consists of an antiseptic cushion, four-cornered, made of carbolized gauze filled equally and smoothly with carbolized jute; this cushion is applied directly to the wound, and is kept firmly in place by an elastic bandage which overlaps the dressing.] Of twelve amputations (9 of the leg) performed and treated in this way, secondary hemorrhage occurred in none; in most of them the first dressing was not removed for 14 days, and on it was then found only a narrow, dry streak of blood, corresponding to the linear cicatrix. In resection the author advises that after all visible ends of vessels have been tied, the wound should be closed with the continuous glover's suture, and that the limb should then be made fast to a splint and kept elevated for at least half an hour. In 56 resections managed in this way since 1878, neither secondary hemorrhage nor death had occurred. Since

Easter, 1879, the author had also, in his operations for diseased bone, given up the practice of plugging the cavity from which the sequestrum had been removed; instead of this he now carefully disinfects the cavity, introduces absorbable drainage tubes, closes the wound in the skin at once, and applies the permanent dressing; the last step in the proceeding is, as before, the removal of the elastic tube. Twelve cases were treated in this fashion, and in none of them did secondary hemorrhage occur; in all of them the wound remained aseptic, and in several instances complete primary union took place. Esmarch also states that he has frequently adopted, and with similar results, the same method in various other operations on the extremities, such as the removal of tumours from these parts; in the neighbourhood of the shoulder and hip-joints, however it is a matter of much greater difficulty to carry out the above directions, and so to obtain a perfectly bloodless operation.—*Glasgow Med. Journ.*, Aug. 1880.

—

The Radical Cure of Cancer.

Professor KOCHER of Bern, in a contribution to the *Deutsche Zeitschrift für Chirurgie*, Band 13, Heft 1, 2, on the surgical treatment of cancer, insists on the importance of removing not only the part primarily diseased, but likewise all affected glands. The proximal set of lymphatic glands should, it is stated, be always removed, since, in most cases of superficial cancer brought under the notice of the hospital surgeons, those adjacent structures are already affected. The author's paper is one of much interest, as being a record of the results that have followed the performance of radical and formidable operations for the removal of cancer. Twenty-nine cases of this kind are reported, in five of which pharyngotomy was performed; in fourteen, excision of more or less of the tongue; and in ten, removal of cancer of the rectum. In four only of all these cases did the operation cause death, and in nine of the remaining twenty-five cases radical cure is believed to have been effected. In this set of cases, in which surgical procedures of great danger and difficulty had been applied for the treatment of a disease with most unfavourable prognosis as to recurrence, the mortality was somewhat less than 14 per cent., and the proportion of complete cures about 31 per cent. The reduced mortality is attributed by the author to his endeavour to carry on as far as possible an antiseptic method, and the number of radical cures to his practice of removing with the primary seat of the disease all accessible diseased glands, and cutting in a direction from the affected glands to the original seat of the disease. Of the five patients in whom pharyngotomy was performed by Professor Kocher, one died on the thirty-sixth day from pneumonia, two died from speedy and one from late relapse (two years), and the fifth, when last seen, was quite free from disease three years after the date of the operation. The operation of pharyngotomy has, with regard to its immediate results, been attended with exceptional success in the practice of Professor Kocher, but in most of these cases some portion only of the posterior or lateral walls of the pharynx was removed, and a less severe surgical proceeding seems to have been needed than in the fatal cases treated by Von Langenbeck and Gussenbauer. The chief danger, however, attending the removal of the whole or of a portion of the pharynx, is the passage of food into the air-passages during deglutition, and consequent pneumonia. This evil Kocher endeavours to guard against by tracheotomizing the patient in the first stage of the operation, the cannula being allowed to remain during the after-treatment, and the entrance to the œsophagus being plugged by a piece of sponge dipped in some antiseptic solution. The patient is supplied with food, at certain intervals, by means of a tube passed into the œsophagus under the carbolic acid spray.

Kocher regards preliminary tracheotomy as an indispensable proceeding in pharyngotomy. The superior is preferred to the inferior operation, as it is less likely to be followed by obstinate venous hemorrhage. The passage of blood into the trachea is prevented by plugging of the orifice of the larynx with a small piece of disinfected sponge. This plug is introduced after exposure of the deeper structures, and when the patient is thoroughly under the influence of an anæsthetic. It should be renewed frequently during the operation and whenever it is saturated with blood. The application of Trendelenburg's distensible ball-plug to the interior of the trachea is believed by Kocher to be attended with much difficulty. In order to reach the diseased portion of pharynx, an extensive incision is made, so as to form three flaps. The knife is carried from over the lower margin of the inferior maxilla, at or near the symphysis, downwards to the hyoid bone, and then laterally to the anterior margin of the sterno-mastoid muscle; from the posterior extremity of this incision, the knife is carried upwards towards the external ear, and along the ascending ramus of the jaw, and downwards to the superior and posterior part of the larynx. The superficial portion of the submaxillary gland, together with the adjacent and adherent lymphatic glands, is next removed. In this stage of the operation, the lingual and facial arteries are secured by double ligatures and divided. The laryngeal orifice having been plugged by a piece of sponge, the mylo-hyoid muscle is divided near its attachment to the lower jaw, so that the finger can be carried into the mouth, and be passed backwards so as to feel the extent of the disease in the pharynx. The inferior portion of the diseased structure is dissected away carefully from below and through the wound, whilst its superior limits are divided from the mouth. When the lateral wall of the pharynx, together with the tonsil and a portion of the soft palate, are involved in the disease, this part of the operation will be much facilitated by division of the inferior ramus of the lower jaw, which permits elevation of the ascending ramus and free exposure of the structures beyond. This proceeding should not, however, be carried out, Kocher states, save when urgently required, since it often results in the formation of a permanent false joint. During the subsequent treatment, the deeper portions of the wound, together with the entrances into the respiratory and digestive tracks, are covered by a piece of sponge previously disinfected, which is frequently renewed under the spray. The patient is fed twice in the day by fluid nutriment introduced through an œsophageal tube. Kocher claims as the advantages of his extensive and irregularly shaped wound, compared with the long straight incision practised by Von Langenbeck, that it allows much more exposure of the affected parts, and freer removal of the disease; that it enables the surgeon to plug the orifice of the larynx and œsophagus, and that it facilitates deligation of the numerous arteries divided during the operation, and so reduces the extent of the bleeding.

Fourteen cases of the removal of lingual cancer are recorded. In most of these, considerable portions of the tongue were removed, and one was a case of total extirpation. One patient died shortly after the operation from secondary hemorrhage and pneumonia; of the remaining patients, eight suffered from relapsing cancer, whilst five, including the case in which the whole of the tongue was removed, are regarded by Kocher as cured. Of the latter, one patient was living and free from disease eighteen months after the date of the operation; in two cases there was an interval of five years; and in one case an interval of six years and a half. In none of the reported cases of relapse after operation was the duration of the case, from the first appearance of the symptoms, longer than twelve months. In all the cases of supposed radical cure, the operation had been

performed at an early stage of the disease, and before any apparent glandular affection.

Kocher, in discussing the kind of operation for the removal of cancer of the tongue, states that the surgical procedure most likely to be followed by success is such as will best favour, in the first place, a ready control and arrest of hemorrhage; in the second place, a free exposure of the field of operation, so that the smallest lymphatic glands may be seen, and, if necessary, removed; and, lastly, a free flow of buccal secretion during the subsequent treatment. None of these indications are fulfilled by attacking the disease from the mouth, a method to be practised, it is held, only in cases of small and circumscribed cancerous deposit at the tip of the tongue. Kocher operates from the neck, but his method differs considerably from that of Regnoli, in the wound being made on the side and not in the front. Division of the lower jaw is unnecessary, it is thought, save in cases in which the floor of the mouth is involved in the disease, and the infiltrated soft structures cannot be freely moved over the inner surface of this bone. In such instances, partial resection of the jaw would probably be found preferable to simple division. In Kocher's operation, devised with the aim of removing adjacent glands, as well as more or less of the diseased tongue, a large flap of skin having been made by an incision carried along the anterior margin of the sterno-mastoid muscle, and by a second carried from the posterior extremity of the first to the body of the hyoid bone, the submaxillary and adjacent lymphatic glands are removed, and the mylo-hyoid muscle exposed. This muscle, together with the buccal mucous membrane, having been divided near the lower jaw, the side of the tongue, from apex to base, becomes freely accessible. The galvano-cautery has certain decided advantages over the écraseur; it may be applied with much more precision; it guards against diphtheria of the raw surface of tongue, and, according to the experiences both of Billroth and of Kocher, its application is less likely to be followed by relapse. When used slowly, it seldom causes any primary hemorrhage, but in many instances the separation of the eschars is attended with serious secondary hemorrhage. If the operation can be performed slowly, and all divided vessels can be immediately secured, the diseased portion of tongue may be best removed by a cutting instrument, deligation having been practised on one, or, in case of total extirpation, on both lingual arteries. With regard to the danger of secondary hemorrhage, the cutting operation, Kocher states, is the safest, indeed the only safe operation. It is held that a great step in glossotomy has been made by Mr. Barker, of University College Hospital, who has practised preliminary tracheotomy in this operation. With the retention of the canula during the after-treatment, the oral and nasal cavities may be kept closed, and the wounded surfaces be protected by antiseptic dressings.

Of the ten cases of cancer of the rectum in which the disease was removed by surgical operation, two terminated speedily in death, three others in death after relapse, and four resulted in supposed radical cure. In the fatal cases and those of relapse the cancerous disease was of considerable extent, and the patients were not submitted to that particular method of operation lately practised by König, and regarded by him as most effectual with respect to the control of primary hemorrhage, the prevention of local infection, and the radical removal of the disease, both in the gut and in its lymphatic glands. The plan of dissecting upwards from the anus is rejected, and preference is given to a long median incision behind the anus, and in the posterior gap between the buttocks, so as to expose the posterior surface of the rectum, and to permit a dissection of the lateral and anterior walls from the surrounding soft parts. In this operation, diseased glands can be readily removed from the hollow of the sacrum, and this

proceeding is carried out before the dissection of the gut. When a considerable extent of gut is involved in the disease, the coccyx is excised. König does not attach much importance to any attempt to bring down and fix the margins of healthy mucous membrane to the margins of the external skin-wound at the anus. The sutures usually tear away, and, by covering the raw surfaces by mucous membrane, free discharge of wound secretions is obstructed.

Free removal of cancer of the rectum has, on the whole, been attended by very good results. In one of König's cases the patient was living, and free from disease, eight years after the operation, and in three other cases there has been no return after intervals of three, five, and seven years. As Volkmann, however, has reported cases in which there had been intervals of six, eight, and eleven years between the date of the operation and the occurrence of relapse, it is open to doubt whether in the cases recorded by König the patients can fairly be regarded as radically cured.—*London Med. Record*, July 15, 1880.

—

Scleritis and Sclero-Keratitis.

In an article on the treatment of inflammation of the sclerotic (*Recueil d' Ophthalmologie*, May, 1880), Dr. GALEZOWSKI insists on the importance of clearly distinguishing between scleritis confined to portions of the sclerotic distant from the corneal limbus, and scleritis occupying the limbus. In the former case, the disease, though obstinate, is, as a rule, curable, and will leave no external traces upon the eye nor permanently interfere with vision. The second variety, on the contrary, is frequently followed by grave complications in the cornea and iris, and may lead to permanent blindness. Both forms are intimately connected with a rheumatic or gouty diathesis, but may also be dependent on the presence of struma. As regards treatment in the first-mentioned variety of the affection, Dr. Galezowski has developed a certain procedure, which has given him excellent results. He first of all has recourse to alternate instillations of atropine and eserine, using the former twice a week, the latter every day. He then applies flying blisters to the forehead and temples, and uses ocular douches of steam. Internally, salicylate of soda is administered, in daily doses of from 2 to 4 grammes, with hypodermic injections of pilocarpine. In scleritis of syphilitic origin, he places his chief reliance on iodide of potassium. Each of these stages of treatment is illustrated by reported cases. In certain instances the author has found great benefit from scarifications at long intervals of the inflamed and swollen surface of the sclerotic. The incision should be perpendicular to the corneal border, and should extend down to the sclerotic. If done once every ten or twelve days, a single incision will often suffice to arrest the further progress of the affection. The second variety of scleritis, viz., sclero-kerato-iritis, is always localized at first in the ciliary region, very near to the corneal border, whence it spreads progressively to the cornea and the iris. In such cases, the author considers there is only one really efficacious treatment, viz., iridectomy. In most cases the pain is at once relieved, and within ten or fifteen days after cicatrization has become established, the swelling and redness disappear, and the affection is cured without danger of relapse. In support of this doctrine, he gives the histories of two cases. In one the affection has proved rebellious to all treatment, and the cornea was becoming gradually infiltrated throughout its whole extent. There was also very intense periorbital pain. Iridectomy gave immediate relief, and subsequently removed all the symptoms. In another, a strumous girl had suffered for several months from sclero-keratitis. Both eyes were affected; there were interstitial deposits in the cornea, posterior synechiæ, and symmetrical inflammation of both sclerotics. In this case, also, the results obtained by iridectomy were most satis-

factory. The author concludes by stating that he considers the above operation to be the only successful plan of dealing with these troublesome cases.—*London Med. Record*, June 15, 1880.

—

Choroiditis after Relapsing Fever.

According to TROMPETTER, in a recent epidemic of relapsing fever (febris recurrens) in Breslau (*Klin. Monatsblätter für Augenheilkunde*, April, 1880), acute choroiditis or cyclitis occurred in 21 out of 325 cases, *i. e.*, in about 6 per cent.—a higher proportion than was observed in the previous epidemic. The ocular disease began either late in the course of the fever, or after its termination. Hypopyon was of frequent occurrence, but disappeared under treatment; the iris was unaffected. The vitreous humour was invariably clouded. Acuity of vision, and light perception, were much impaired at the outset; the visual field was peripherally contracted, indicating probably, that the disease affected chiefly the anterior part of the choroid and the ciliary body. The course of the choroidal affection was almost always favourable. It lasted commonly from one month to six weeks. In two cases, both eyes were affected. Embolism or metastasis from splenic abscesses, which constantly occur in relapsing fever, is believed by the writer to be the cause of the choroiditis. Atropine locally and mercury internally, with laxatives, constituted the treatment.—*London Med. Record*, July 15, 1880.

—

Epileptic Amaurosis.

CHRISTENSEN relates in the *Ugeskrift for Läger*, second series, Band 27 (abstract in *Nordiskt Mediciniskt Arkiv*, Band 11) the case of a married lady, aged 33, of healthy family, who, since her first menstruation in her twelfth year, had had attacks of loss of consciousness, sometimes with convulsions, followed by blindness of several hours' duration. These attacks occurred at each menstrual period, and ceased with the appearance of the catamenia. From her eighteenth year the convulsions became more severe, but the sensory impairment grew more rare and weaker. In December, 1872, the convulsions and catamenia did not occur; but after several days' headache and giddiness, she became blind in the course of an hour. The fundus of the eye was normal. Under the use of leeches and counter-irritants the headache ceased. Some days afterwards she had an epileptic attack, in which there was considerable hyperæmia of the optic disk and retina. She menstruated in January, and her sight began to return. After some months her vision was $=\frac{1}{2}$, with blindness to red; the disk was somewhat atrophied. Four years later she had a similar attack of blindness, but not complete. Vision returned after the appearance of the menses, but again failed, and progressive atrophy of the optic nerve now commenced. The author believes the most probable proximate cause to have been hyperæmia or inflammation of the optic nerve behind the bulb.—*London Med. Record*, July 15, 1880.

—

Case of Acute Glaucoma.

Dr. COURSSERANT relates this case in the *Journal des Connaissances Médicales*, April 15, 1880. A man, aged 47, suffered from chronic gastritis with acute crisis. During three months each crisis was accompanied by prodromata of glaucoma, which disappeared during the intervals. Finally, a violent unilateral acute glaucoma set in during a crisis and persisted after its remission. Iridectomy restored vision almost to its normal acuity, and eight months later this eye had suffered no relapse. The other eye, similarly attacked during a gastric attack, was relieved by eserine, and permanently benefited by iridectomy. Reflex action

upon the vaso-motor system in the eye is suggested as the cause of the glaucoma. —*London Med. Record*, July 15, 1880.

—

Case of Convergent Strabismus of Intermittent Character.

Dr. SAMELSOHN relates the following case in the *Centralblatt für praktische Augenheilkunde*, April, 1880. A girl, aged 12, presented strong inward deviation of the right eye. Both eyes were slightly hypermetropic; in both there were slight corneal opacities; an examination with prisms revealed a remarkable indifference to diplopia. The strabismus existed only on alternate days; during the intervening days no trace of deviation, even with the eye covered, was discoverable. The examination was repeated daily, and at various times of day, for weeks together, and showed that the squint maintained an intermittent character of regular tertian type. Quinine and arsenic had no influence over it.—*London Med. Record*, July 15, 1880.

—

New Operation for Entropium of the Lower Lid in Old People.

The aim in operations for relief of entropium is to make, by the removal of a fold of skin or the formation of a cicatrix, such a traction upon the tarsal cartilage as will prevent its inversion. HOTZ urges (*Klin. Monatsblätter für Augenheilkunde*, May, 1880) that to be efficient such traction requires a fixed point below, and that the lax integument of the cheek does not afford this requirement. The lower border of the tarsal cartilage, being bound by the fascia to the orbital margin, is, as regards all vertical traction, a fixed point. The steps of the operation advised are, briefly, as follows: A horizontal incision is made through the skin at a distance of 4 to 6 millimetres from the edge of the lid, and reaching from the inner to the outer canthus, so as to separate the skin of the lid from that of the cheek just over the lower margin of the tarsal cartilage; the lips of the incision are widely retracted, and that portion of the orbicularis muscle which covers the lower edge of the tarsal cartilage is removed; silk sutures, generally four, are introduced so as to obtain union of the cut edges of the skin with the exposed lower margin of the cartilage and adjacent fascia. A curved needle is passed first through the skin of the lid close to the cut edge, then through the lower edge of the cartilage and out again through the adjacent fascia, and finally, without any inclusion of any fibres of the orbicularis, from within outwards through the skin of the cheek close to the cut edge. Special details and precautions are given. Excellent results are stated to have been obtained, and notably when previous operation by excision of skin had failed.—*London Med. Record*, July 15, 1880.

—

Abscess near the Lower Eyelid of Dental Origin.

Dr. PARINAUD draws attention (*Archives Générales*, June, 1880) to this occurrence, which he believes is by no means infrequent, although its origin is overlooked. The summary of his paper is as follows: 1. Alterations in the temporary or permanent teeth may induce suppuration of the lower eyelid opposite the orbital border or in the region of the lachrymal sac, where it sometimes simulates lachrymal tumour or fistula. 2. The course pursued by the pus, which originates in an alveolo-dental periostitis, being intra-osseous, is difficult of detection, and is not always in the same direction. 3. A variety of this periocular suppuration is special to children of about five or six years old. The arrangement of the alveoli of the first and second dentitions explains this predisposition, and explains the occurrence of these suppurations, which may become complicated with necrosis of the orbital border. 4. In the adult, besides the cases of lachrymal tumour,

properly so called, which may sometimes be attributable to a carious tooth, suppuration at the great angle of the eye may be observed under two conditions. Pus originating in an alveolus may penetrate into the maxillary sinus, induce inflammation there, and give rise consecutively to the formation of a cutaneous fistula at the inner angle of the eye. In another set of cases, probably much more frequent, the lachrymal passages are free, and the sinus is not implicated, and the connection is not visible which unites the abscess or the fistula to the dental alteration. Vascular canals, which open constantly by one or two orifices on the nasal process of the superior maxilla, and which communicate also with the foramina of the alveoli, explain the development of these suppurations. 5. In suppurations of the lower eyelid, in necrosis of the orbital border, and in suppurations or fistulæ at the larger angle of the eye, we should therefore ascertain whether the cause of the accidents observed is not a bad tooth, the extraction of which is the primary indication of treatment.—*Med. Times and Gazette*, July 17, 1880.

—

Treatment of Granulations in the Pharynx and Larynx by Ignipuncture.

Dr. KRISHABER (*Annales des Maladies de l'Oreille, du Larynx, etc.*, May 1880) gives a description of glandular pharyngo-laryngitis—its causes, pathology, symptoms, diagnosis, and finally its treatment. The part of the larynx most commonly affected is the mucous membrane of the arytenoid cartilages. The author has, however, seen distinct granulations on the vocal cords without any concomitant implication of the remainder of the larynx, or of the pharyngeal mucous membrane. The granulations produced by hypertrophied glands may, if isolated, pass unnoticed during life, unless a very powerful illumination be employed. This, according to the author, explains how it is that some observers deny the presence of granulations in the larynx. They are almost always of larger size in the pharynx. When the granulations in the larynx attain to a considerable size, they form true polypi, having the structure of œdema. For destruction of the granulations, the author prefers the application of ignipuncture. When the granulations are situate in the pharynx, he uses for the purpose Paquelin's thermo-cautery, and when in the larynx the galvano-cautery. (The latter may, however, be used for both forms.) Three cases are cited, in which granulations in the larynx were treated by this method. In the first case, there were two large granulations in the anterior angle of the right vocal cord, one of which was removed by a single application of the cautery, the voice becoming perfectly clear. In the second case, both pharyngeal and laryngeal granulations were cauterized, with great improvement to the voice. In the third case, two large granulations, which produced no inconvenience, were accidentally discovered on the free margin of the epiglottis, and removed by a single application of the galvano-cautery. A fourth case is also described of a lady, suffering from pharyngo-laryngeal granulations, accompanied by a feeling of a foreign body in the throat, and a dry cough. Under treatment by ignipuncture, complete recovery ensued. The author considers that the danger in this method of treatment is much less than it seems; the normal laryngeal mucous membrane presenting a much greater resistance to cauterization than the morbid growths. The efficacy of this method is infinitely superior to that of other caustics. Of pharyngeal granulations treated by ignipuncture, the author has had more than forty cases. The number of applications required in these cases varies from five to twelve. In conclusion, the author states that this treatment of glandular pharyngo-laryngitis is almost painless, and is followed by no inconvenience, a result being very promptly obtained. It is easily applied, and, except in some rare cases, requires no special skill in its employment.—*London Med. Record*, July 15, 1880.

Examination of the Œsophagus under Chloroform.

The following is an abstract of a contribution by Dr. GIRARD, of Berne, to the *Centralblatt für Chirurgie*, No. 21, 1880. Under certain conditions, it is found necessary to give chloroform in order that a bougie may be passed readily down the œsophagus. In the administration of this anæsthetic, the usual sitting and the half-recumbent positions are inconvenient, and in the former position chloroform is dangerous, and the passing of a bougie during anæsthesia may be attended with much difficulty. This difficulty may be overcome by placing the patient on an operating table with the body lying horizontally and the head projecting beyond the table's edge, where it should be supported by an assistant, in order that the cervical vertebræ may not be bent too much over the edge, and made so prominent as to prevent the introduction of the œsophageal bougie. The surgeon stands on the left side of the patient, and is now able to introduce the sound under the following favourable conditions. 1. The mouth is either found open, or can be opened without any difficulty. 2. The trunk, neck, and head can be very readily fixed in the desirable position. 3. The buccal cavity, the pharynx, and the œsophagus are in a straight, or nearly straight line, and a straight instrument, if not too thick, can be easily passed. The surgeon, holding the bougie in the supinated hand, passes it in a horizontal direction, with a movement like to that of the first step of urethral catheterism. The supination of the surgeon's hand, and the horizontal movement, allow a freer, readier, and more delicate introduction of the bougie than does the movement in a vertical direction, and so favours a close exploration of any obstruction or stricture. Dr. Girard reports that he has practised this method in two cases with very satisfactory results. In one of these he had to deal with a carcinomatous stricture of the œsophagus, the coats of which were so sensitive that it was difficult to pass a bougie, save under chloroform. On the administration of this anæsthetic to the patient in the above described position, bougies of large size could be passed readily and precisely through the constricted portion of the canal. The second case was one of foreign body in the œsophagus. In conclusion, Dr. Girard suggests that it may be possible to apply his method to the introduction into the œsophagus of instruments permitting an endoscopic examination.—*London Med. Record*, July 15, 1880.

—

Foreign Bodies in the Air-passages.

The first case related by VOLTOLINI (*Monatssch. fur Ohrenheilkunde*, December, 1879) is that of a peasant, aged 27, into whose windpipe a needle, with a short thread attached to it, accidentally slipped. With the laryngoscope, the needle was seen to be sticking into the anterior wall of the trachea, not far above the bifurcation, and from the eye of the needle the black thread could be traced running across the trachea over the right true and false vocal cords to the arytenoid cartilage of the same side, the thread being continually blown to and fro by the current of air. Attempts to seize the thread with forceps were at first unsuccessful; subsequently, however, the author appears to have succeeded in loosening the needle with the forceps, and it, together with the thread, was coughed up. With the view of preventing in future cases a needle which has entered the trachea from falling down lower, the author has made some experiments, from which he finds that the application to the skin over the windpipe of an electro-magnet prevents the needle from falling down and retains it in contact with the tracheal wall. He also suggests withdrawing the needle through the glottis by means of a wire attached to the electro-magnet (and therefore itself magnetized); but in attempting to do so the needle would in all probability become detached by closure of the glottis, and so fall down into the trachea. In

the second case, the ends of a pair of forceps had broken off and fallen into a patient's chest during an operation for laryngeal polypus. Violent cough ensued, which resulted after nine months in expulsion of the foreign body. The foreign body in this case was supposed to have passed into the stomach, but Voltolini suggests that an analysis of the sputum might have decided the question by showing the presence of iron, especially as the forceps was found to be much rusted. The patient recovered so completely, that auscultation and percussion indicated nothing abnormal. The author urges the necessity of care in preventing instruments used in the larynx from breaking off.—*London Med. Record*, July 15, 1880.

—

Foreign Bodies in the Œsophagus.

In a recent communication to the *Société de Chirurgie*, of Paris, of which a report is given in the *Gazette Médicale* of June 12th, M. LANNELONGUE stated that, during a service of three years and a half at the Sainte-Eugenie Hospital, he had extracted at least eighteen foreign bodies from the œsophagus in children. Of these bodies, thirteen were pieces of money, twelve having been sous and one a two-franc-piece. The other objects belonged to sets of toys and consisted of small plates, small bowls, portions of wheels from toy carriages, and, in one case, a small toy flask containing curaçoa. The ages of the patients varied from eighteen months to six years and a half. Children beyond the latter age are, as a rule, too sensible to swallow such articles as those mentioned. The young subjects of these accidents do not confess at once for fear of being scolded, and do not relate what has happened until the occurrence of disturbing symptoms. These symptoms usually consist in difficulty of deglutition and of pain and disturbance, often of reflex origin, in the movements of respiration and phonation. It generally happens that some time has passed between the introduction of the foreign body into the œsophagus and the application for surgical aid. In the first place, the surgeon should make sure that the foreign body has really been swallowed. He ought at once to explore the pharynx, not with the laryngoscope which the child would not tolerate, but with his finger. He should then proceed to examine the œsophagus with an olivary sound. This instrument, however, frequently deceives. After the foreign body has remained in the gullet for a short period it becomes coated with portions of food and with mucus, and so no rubbing noise can be heard on its contact with the olivary instrument. It is thought that the best instrument to introduce is the *panier à bascule* of Graefe, which consists of a small cage with two hooked appendages, the whole being fixed at one extremity of a curved rod. By means of this instrument the foreign body may be caught in one of the hooks and then withdrawn. In a brief analysis of his eighteen cases, M. Lannelongue stated that all the pieces of money were readily extracted by the use of Graefe's instrument. In one case serious hemorrhage followed the extraction of the foreign body, which was a small porcelain plate. In the case of a child, a little girl aged 6½, who had swallowed the toy flask of curaçoa, after the body had been felt with a sound and its position near the stomach made out, no attempt was made at extraction for fear of breakage. It was allowed to remain, and, on the third or fourth days, was discharged in pieces by the rectum. Instances of foreign body in the œsophagus of an adult are of rare occurrence. The author has seen two such cases. In one, the patient, a soldier, had swallowed an onion which, probably through its contact with fluids, had swollen so as to excite symptoms of commencing suffocation. M. Lannelongue, having no special instruments at hand, had recourse to a lithotrite. The male branch having been passed between the inferior part of the pharynx and the foreign body, the female branch was slipped

down on to the foreign body, which, after a lateral movement of the lithotrite, was rejected by a violent effort on the part of the patient.—*Lond. Med. Record*, July 15, 1880.

—

Diagnosis of Tumours of the Mammary Gland.

Although the lines of demarcation between many of the tumours of the mamma are not very distinct, yet a careful attention to their more prominent signs enables one to arrive at a pretty correct judgment as to their true nature. From an analysis of the cases that have occurred in his own practice, and of those collated from various sources, Dr. SAMUEL W. GROSS has framed the following conclusions:—

1. A uniformly hard, perfectly movable, nodular, slowly growing tumour, particularly if it be seated at the upper and outer part of the gland of impubic subjects and of married women toward the twenty-third year, and be free from ulceration, alterations in the skin, veins, nipple, and lymphatic glands, is a solid fibroma, and the diagnosis is strengthened by the presence of several growths in one or both breasts.

2. A hard, lobulated, peripheral tumour, or one which, after having remained stationary or progressed slowly for several years, suddenly and rapidly acquires a large volume, assumes an unequal consistence, being firm at some points and soft or fluctuating at others, occurring toward the thirty-sixth year, unaccompanied by lymphatic involvement, but attended, possibly, with discoloration of the skin, deformity of the nipple, and limited superficial adhesions, and, it may be, with dilatation of the veins, discharge from the nipple, and ulceration and fungous protrusion, is a cystic fibroma.

3. A firm, rapidly growing, peripheral tumor, appearing in prolific married females at about the thirty-seventh year, with, possibly, discoloration and adhesion of the skin, and ulceration, but without deformity of, or discharge from, the nipple, or enlargement of the glands, is a solid sarcoma. A tumour possessing these attributes and occurring toward the thirty-second year is probably a firm spindle-celled sarcoma, while one developing at about the forty-second year is more apt to be a firm round-celled sarcoma.

4. A lobulated tumour, particularly if it involves the greater part of the mamma, of quick growth from the commencement, or progressing rapidly after having increased comparatively slowly for some time, of large size, of varying or unequal consistence, occurring toward the thirty-third year, in prolific married subjects, and attended with discoloration of the skin, ulceration, enlargement of the veins, and, possibly, with discharge from the nipple and limited adhesions, or, it may be, with deformity of the nipple and glandular enlargement, is a cystic sarcoma. A very rapidly progressing tumor, of soft, apparently fluctuating consistence, with stretched skin and enlarged veins, appearing in young girls before puberty and in young married women, is a medullary sarcoma, which may be solid or cystic, and is, as a rule, composed of small spindle cells.

5. A solitary, rapidly and continuously growing, although not very bulky, rather firm, or, possibly, soft tumor, occurring at about the forty-fifth year, with limited discoloration of the skin, but not fixed to the chest, and attended, possibly, with deformity of the nipple, superficial adhesions, ulceration, dilatation of the veins, and enlargement of the axillary glands, is a solid myxoma.

6. Cystic myxoma possesses the same consistence and growing attributes of the former variety, but it develops at about the forty-eighth year, and is liable to be attended with discoloration, adhesion, and ulceration of the skin. The veins, nipple, and glands, however, are normal.

7. A hard, heavy, nodular, solitary, very slowly and equably increasing

tumour, especially if it develops in the immediate vicinity of the nipple of a married woman toward the thirty-fifth year, and is accompanied by adhesion and discoloration of the skin, and ulceration, and, possibly, by deformity of the nipple and enlargement of the glands, but is free from fixation to the chest and dilatation of the veins, and is preceded by a discharge from the nipple, is a cystic adenoma. A solid adenoma cannot be distinguished from a solid fibroma.

8. A densely hard, inelastic, irregular, solitary, slowly growing tumour, occurring in prolific married females toward the forty-eighth year, inseparably connected with the mamma, accompanied by induration and enlargement of the associated lymphatic glands, retraction of the nipple, infiltration of, and, possibly, nodules in, the skin, ulceration, and fixation to the chest, and, it may be, by a discharge from the nipple, is a scirrhous carcinoma; and the diagnosis is strengthened if there be a history of heredity, if the tumour was preceded by psoriasis or eczema of the nipple, or if it be developed from an induration left by puerperal mastitis.

9. A soft, lobulated, voluminous, solitary, and rapidly increasing tumour, occurring in the same class of women, at about the fiftieth year, and attended with infection of the glands and skin, retraction of the nipple, fixation to the chest, and, possibly, extension to the opposite breast, but without discharge from the nipple, or marked tendency to prominence of the veins or ulceration, is a medullary or encephaloid carcinoma.

10. A hard, very slowly growing, small, solitary tumour, occurring toward the forty-fifth year, with adhesion to the skin, and, it may be, nodules in that structure, prominence of the veins, retraction of the nipple, and enlargement of the glands, and, possibly, with invasion of the opposite breast, fixation to the chest, ulceration, and discharge from the nipple, is a colloid carcinoma.

11. A densely hard, irregular and knotty, contracting and small, solitary tumour, occurring at about the forty-seventh year, and attended with retraction of the nipple, infection of the glands and skin, and, possibly, distinct tubers in the latter structure, ulceration, and immobility on the chest, is an atrophying scirrhus.

12. A slowly increasing, solitary, nodular, or slightly lobular tumour, occurring after the menopause, covered by thinned and discoloured skin, fluctuating, and, probably, discharging by the nipple, but without enlargement of the veins or glands, and without fixation to the chest, is an involution cyst.

13. A solitary, smooth, firm and elastic, or, possibly, fluctuating tumour, occurring in the vicinity of the nipple of young and prolific married women, of moderate volume, of slow growth, and unattended with alterations in the veins, nipple, skin, or glands, or with adhesions, but liable to ulceration and enlargement of the glands if it inflames, is an evolution cyst.

14. A solitary, slowly growing, not bulky, fluctuating, or semisolid tumour occurring near the nipple of lactating women, and unattended with changes in the coverings of the mamma or in the glands, is a lacteal cyst.

15. A slowly growing, small, smooth, round, firm, and elastic, or fluctuating, solitary tumour, occurring between the ages of twenty and thirty years, seated at the upper and outer border of the breast, and not near the mammilla, with a disposition to ulcerate, but without other changes in the skin, veins, or glands, is an hydatid cyst.—*New York Med. Journal*, June, 1880.

Paracentesis of the Pericardium.

Dr. P. KUMMELL, of Berlin, in a contribution on the subject of paracentesis pericardii (*Berliner Klinische Wochenschrift*, No 23, 1880) states that this operation is very seldom indicated. Of 12,837 patients admitted into the Allgemeine

Krankenhaus of Berlin during the past five years, there were but thirty-eight affected with pericarditis. In eight of these cases there was considerable effusion of fluid into the pericardial sac, but in two only of these instances was it thought necessary to have recourse to tapping. The subject of the first case was a male, aged 22, who, in the course of a second attack of acute rheumatism, suffered from acute fibrinous pericarditis, resulting in considerable pericardial effusion. For the relief of extreme and threatening dyspnœa, the fourth intercostal space was punctured by a needle attached to an aspirating syringe, and about two ounces of blood-stained serous fluid removed. The results of this operation were most satisfactory: the dyspnœa ceased almost immediately; there was no renewal of the effusion, and the patient made a speedy and complete recovery. The second case was one of considerable effusion into the pericardial and left pleural sacs of an emaciated and anæmic man, aged 50, whose general health had previously been very good. In consequence of increasing dyspnœa with cyanosis, the pericardial sac was tapped on the sixth day of treatment, and thirteen ounces and a half of clear serous fluid were withdrawn. At the same time, twelve ounces of fluid were removed from the left pleural cavity. The tapping gave much temporary relief, and was followed by diminished intensity of the dyspnœa and cyanosis, but two days later it was found necessary to repeat the operation. Fifteen ounces of slightly blood-stained serous fluid was removed, but again with only temporary relief. There was rapid re-accumulation of the fluid, and the patient died on the fourth day after the date of the second operation. The post-mortem examination revealed deposit of gray tubercle in the serous layer of the pericardium, recent pericarditis, enormous distension of the walls of the sac, and accumulation within the sac of about thirty ounces of blood-stained fluid containing soft fibrinous flakes. The puncture in the second case had healed, and no traces of any inflammatory reaction could be observed along the course of the needle. About three-quarters of an inch above the line of puncture, there was found an adhesion of the parietal to the visceral layer of the pericardium, of the extent of a thaler piece. Had the needle been introduced at this part it would probably have passed into the muscular structure of the heart, and no serous fluid would have been drawn off. Adhesions of this kind are usually of limited extent in front of the heart. In order to guard against error or danger, it is recommended that one, or, if necessary, more preliminary punctures be made with the small needle of a Pravaz's syringe. A fine and well-tempered needle may be introduced at any point without danger, even if it pass into the wall of the heart or into one of its cavities. The puncture should be made at a distance of about two inches from the left margin of the sternum, and in one of the spaces between the cartilages of the fourth and seventh ribs. The puncture, Kummell states, is best made with a hollow needle attached to an aspirating syringe, the diameter being about one-twelfth of an inch. This method of operation is advocated as one that can be most easily practised and is attended with least danger. It is applicable to most of the cases in which paracentesis pericardii is indicated, and it can be conveniently repeated at short intervals. It remains to be proved by future experience whether equally good results can be obtained by dissecting down to the pericardium under antiseptic conditions.—*London Med. Record*, July 15, 1880.

Modification of Lee's Operation for the Radical Cure of Varicocele.

Prof. JAMES M. HOLLOWAY, of Louisville, finds (*Medical Herald*, August, 1880) that between the upper and lower needles, where the subcutaneous division of the veins is to be done, the structures have to be stretched by an assistant in order that the enlarged veins may be tightened, as tendons are put on the stretch in the operation for talipes; otherwise the sharpest knife will hardly sever the veins.

They are enlarged, tough, and very elastic, as is shown by their variable aspect when empty or full. And this is the cause of the difficulty in doing the operation as directed by Mr. Lee. The veins are more elastic than the fascia and skin; consequently, when the assistant has separated the needles to the utmost, the skin is tense and the fascia seems to be so; but the elastic, tortuous, empty veins move freely away from the sharp edge of the knife, and when finally imprisoned between the blade and the stretched integument, are only partially severed if at all. Any force exercised at this stage of the operation is likely to drive the sharp edge through all the structures, and thus defeat the effort to do a subcutaneous section. Having failed to accomplish a cure in several cases by a patient effort to do the operation as Mr. Lee directs, Dr. Holloway adopted the plan of enlarging slightly the orifice in the skin and fascia made by the tenotome; then, by carefully lifting each vein upon the edge of the knife, he draws it to and causes it to emerge slightly through this orifice, and then its section becomes not only easy but demonstrable. After the veins are divided, one suture is sufficient to close the incision and make it in all respects a subcutaneous wound.

—

Essence of Winter-green in the Treatment of Purulent Cystitis, etc.

M. Perier has treated a patient suffering from purulent cystitis by washing the bladder out with an antiseptic substance, hitherto more employed by perfumers than by chemists, the essence of winter-green (*Journal de Médecine et de Chirurgie*, May, 1880). It is a powerful antiseptic with a penetrating and rather pleasant odour, not at all of an irritating character. Unfortunately, it is but little used. Its somewhat high price would be no obstacle to its use, because it is only employed in small doses. The essence of winter-green is obtained from the *gaultheria procumbens*, a shrub which grows in North America. This essence is known chemically as salicylate of methylene or salicylic methylether. It is not soluble in water, and some difficulty is experienced in dissolving even small quantities of it. M. Perier has often had recourse to the following solution: Essence of winter-green, 6 grammes; tincture of quillaya saponaria, 30 grammes; water, 1 litre. He uses this solution freely for washing out the bladder, with excellent results, and without causing the least irritation. It constitutes an excellent fluid for the washing of wounds and for simple dressings. M. Perier likewise combines winter-green with vaseline, so as to make an antiseptic and inodorous ointment. He uses the following proportions: Essence of winter-green, 1 gramme; vaseline, 100 grammes. He greases his sounds and specula with it, and also uses it to anoint his fingers and hand, for examination by touch. Even in the practice of antiseptic surgery, M. Perier frequently covers his hands with this antiseptic vaseline instead of washing them too often with carbolic acid and water.—*London Med. Record*, June 15, 1880.

—

A Difficult Case of Stone in the Bladder.

At a recent meeting of the Imperial Medical Society of Vienna, Professor Dittel related the following case. A merchant, aged 48, had for ten years suffered from disease of the bladder, and for four months had had symptoms of stone. Having ascertained the presence of a calculus, Dr. Dittel performed lithotrity twice. A quantity of detritus, consisting of phosphate and oxalate of lime, was removed; but the principal mass of the stone resisted crushing, and Dr. Dittel suspected that it was sacculated. He directed an assistant to introduce his finger into the rectum and push the stone forward; but still he was unable to seize it. As a result of the lithotrity, a large number of fragments of stone came away; but one remained so firmly fixed in the fossa navicularis, that urethrotomy was

necessary for its removal. After four days, a similar accident occurred, and the wound had to be reopened to remove the fragment of stone. On May 2d, Dr. Dittel performed lateral lithotomy. On introducing his finger into the bladder, he reached the diverticulum, but found that the stone was so closely grasped by it that, after trying for an hour, he found it quite impossible to pass his finger between the calculus and the wall of the sac. He therefore decided to perform the high operation, but was still unable to dilate the diverticulum with the finger. He then introduced a scoop between the wall of the diverticulum and the stone, and endeavoured, until he became wearied, to raise the calculus from its bed; an assistant then continued the attempt, using the symphysis pubis as a fulcrum, and applying leverage with all his force until the handle of the scoop was bent. After these attempts had been carried on for an hour and a half, the stone was at last broken up and removed in fragments. Considering the severe handling which the parts had undergone, the most unfavourable result was naturally expected, especially as parenchymatous hemorrhage from the wound set in some hours after the operation, rendering it necessary to plug the rectum. The patient became collapsed, and nausea, vomiting, and other symptoms of peritoneal irritation appeared. The case, however, ran a favourable course. Fourteen days after the operation, the patient was free from fever, and the wounds were perfectly clean.—*British Med. Journal*, June 26, 1880.

On a New Method of Arresting Gonorrhœa.

Under this title Mr. W. Watson Cheyne, Assistant Surgeon to King's College Hospital, describes (*British Med. Journal*, July 24, 1880) an antiseptic treatment of gonorrhœa. An examination of gonorrhœal pus disclosed the presence of micrococci in large numbers, and Mr. Cheyne thinks it probable that the essence of the disease consists in the growth of these or allied organisms.

In the case of gonorrhœa, Mr. Cheyne supposes that, at the time of infection, a small number of the specific organisms, which in all probability possess a considerable resisting power to the destroying action of the healthy living tissues, are retained in the urethra, that these go on developing, that the products of their growth irritate and weaken the mucous membrane in their vicinity, that the organisms can then penetrate into and live in that weakened tissue, and that the extension of this process over a portion of the mucous membrane of the urethra is the cause of the inflammatory symptoms.

Now, granting that this view, Mr. Cheyne says, which I think must be admitted to be very probable, were proved, the problem to be solved for the cure of gonorrhœa would be, how to destroy these organisms without at the same time injuring the inflamed and highly sensitive mucous membrane. If they were destroyed, one would expect the extension of the disease to cease, and the inflamed mucous membrane to return more or less rapidly to a normal state. On thinking this matter over, two substances appeared to me suitable for this purpose, being both powerfully antiseptic, and at the same time but little irritating. These are iodoform and oil of eucalyptus.

The next question was, how to apply them. It is quite clear that, if used as an injection, there would be no certainty that they would be brought into contact with the whole of the inflamed surface, partly because the swollen mucous membrane would interfere with the passage of the fluid, and partly because the patient would not in many cases apply it effectually. At the same time, an injection could not be expected to do much good, for it would flow out very quickly, and the antiseptic would not have sufficient time to act. I therefore use these antiseptics mixed with cacoa butter, and made into bougies of various lengths. These bougies are introduced well into the urethra, and a strap and pad over and around

the orifice retain them. The bougie rapidly melts, and the mucous membrane of the urethra remains bathed in the antiseptic material for any length of time desired. These bougies possess an additional advantage over injections in that, from their size (they have a diameter of a No. 9 or 10 catheter, tapering at the point), they, so to speak, unfold the swollen mucous membrane, and thus cause the antiseptic to be more thoroughly applied.

I have tried the two antiseptics separately and also combined, and I find that they are most effectual when used in combination (possibly because iodoform is soluble to a considerable extent in oil of eucalyptus, and is thus brought into more perfect contact with the mucous membrane). The formula which seems best is five grains of iodoform[1] and ten minims of oil of eucalyptus in a bougie of forty grains. These bougies have been made for me by Mr. Martindale, of New Cavendish Street.

The specific cause of the disease being eradicated by this means, the question of further treatment arises. It seems to me that, although the development of the gonorrhœa is arrested, yet, if the discharge be allowed to become septic and irritating, urethritis might be kept up for some time. I, therefore, order an injection of boracic lotion (saturated aqueous solution of boracic acid), or an emulsion of eucalyptus oil (one ounce of eucalyptus oil, one ounce of gum acacia, water to forty or twenty ounces) to be used for two or three days. At the end of that time, injections of sulphate of zinc, two grains to the ounce, may be begun. At the same time, the great tendency of the urethral mucous membrane, when once inflamed, to remain in a state of inflammation, must be kept in mind, and everything which might tend to keep up the inflamed state must be removed. Notably, the patient must be cautioned against drinking, and it is well to order diluents and alkalies.

The method may be summed up as follows. The patient is first told to empty his bladder, partly to clear out his urethra, and partly to prevent the necessity of expelling the antiseptic from the canal for several hours. He then lies down on his back, and a bougie from four to six inches long is introduced, and the orifice of the urethra closed by strapping. The bougie ought to be dipped in eucalyptus oil, or in carbolic oil (1–20) before insertion. The patient is instructed to refrain from passing water, if possible, for the next four or five hours. If the case be severe and advanced, he takes another bougie home, and is instructed to introduce it in the same manner after he next passes urine. On that evening, or on the following day, he commences the antiseptic injection, which he uses four or five times daily. On the third or fourth day, when the symptoms have entirely subsided, an injection of sulphate of zinc, two grains to the ounce, is begun.[2] At the same time, the other points mentioned are attended to.

I have now used this method in about forty cases, and in all the result has been the arrest of the progress of the gonorrhœa. For a day or two the purulent discharge continues; but afterwards it steadily diminishes in amount, becoming in four or five days mucous, and ceasing altogether in a week or ten days. At the same time, the scalding and pain and the symptoms of inflammation rapidly diminish, and disappear completely in about thirty-six to forty-eight hours. In

[1] A considerable number of the cases have been treated with bougies containing ten grains of iodoform; but Mr. Martindale informs me that during the warm weather it is almost impossible to make them. I find, however, that bougies containing five grains are quite satisfactory, and I have had no symptoms of irritation following their use.

[2] In hospital practice, where the patient is only seen once a week, and where there is no great necessity for arresting the discharge quickly, I do not order the sulphate of zinc injection till the week following the introduction of the bougies.

fact, the case becomes no longer one of virulent gonorrhœa, but one of simple urethritis, rapidly progressing towards recovery, if properly treated.[1]

I have used this treatment only in the early stages of the disease, from the first to the seventh day after the commencement of the symptoms; but it has answered equally well in all. Thus the following is the case in which it was used seven days after the commencement of the symptoms. The patient presented himself on June 19th, stating that the symptoms of gonorrhœa had existed for seven days. There was a profuse purulent discharge from the urethra; the penis was somewhat swollen and red; there was intense scalding when urine was passed, and a constant feeling of heat and uneasiness; no chordee. A bougie, containing ten grains of iodoform and ten minims of eucalyptus oil, was passed down, and the orifice closed in the usual manner. The patient was also ordered an injection of an ounce of oil of eucalyptus and an ounce of gum acacia in a pint of water, to be commenced in the evening, and to be used four or five times daily. On the 19th, he again presented himself, and stated that he had not passed water till five hours after the introduction of the bougie; that the scalding and feeling of uneasiness rapidly subsided, and had completely ceased in forty-eight hours; and that the discharge had steadily decreased from the second day, and was now very small in quantity. He was ordered the sulphate of zinc injection, which completed the cure in three days.

In one case, there was a recurrence of the symptoms. The patient, a hospital patient, first presented himself on June 5th, stating that on June 2d, five days after connection, a discharge had commenced, which had steadily increased, and was now profuse and accompanied with considerable uneasiness and scalding in passing urine. A bougie containing ten minims of oil of eucalyptus alone was inserted; no other treatment was ordered. On June 9th, he returned, stating that, after the introduction of the bougie, the scalding and uneasiness had diminished, and had almost disappeared on the evening of the 6th; but that on the afternoon of the 7th they began to return, and were now more severe than on the 5th. I introduced a bougie containing ten grains of iodoform and ten minims of eucalyptus oil, and gave the patient another to insert at bedtime. At the same time, I ordered the injection of boracic lotion to be commenced on the following day. When seen again on the 16th, he stated that this time the treatment had been successful, and that now the discharge was very slight. An injection of sulphate of zinc and a mixture containing copaiba were ordered, and the discharge ceased entirely on the 20th.

In two or three cases, there has been slight increase in the scalding on the first or second occasion on which the patient passed urine after the introduction of the bougies; but this has only been temporary, and these cases were as rapid as the others. In four instances, however, there has been considerable increase

[1] The course described here is that usually followed when boracic lotion has been employed as the injection; but since I have begun the use of the eucalyptus emulsion, the cessation of the discharge has, as a rule, been more rapid. Thus, to give an example, a patient came to the hospital on July 3d with symptoms of gonorrhœa, which had lasted four days. He was suffering from a very acute attack, having severe scalding and commencing chordee. He had not previously suffered from gonorrhœa. A bougie containing five grains of iodoform and ten minims of eucalyptus oil was introduced; and he was ordered to begin an injection of the eucalyptus emulsion (1 in 40) in the evening. The patient showed himself again on July 7th, and stated that in twenty-four hours the painful symptoms had entirely disappeared, and that the discharge diminished rapidly, and ceased altogether on July 6th. I have since that time had several nearly as rapid cases. I have tried in three cases injections of eucalyptus emulsion without previous introduction of a bougie, but without any appreciable effect on the progress of the disease.

in the symptoms for twenty-four or thirty-six hours. In three of these, the bougies had been made with beeswax; and they did not melt properly, and consequently came out of the urethra at various periods as small cakes. Further, it seems that some iodine had been set free from the iodoform, probably during their manufacture. In the fourth case, four bougies, each containing 10 grains of iodoform, were introduced in succession. In all these, however, the symptoms passed off in about three days; and then the gonorrhœa was found to be checked, just as in the other instances.

Such are the results as yet obtained by this method. I do not claim any specific power for the two substances I have mentioned. It may be that there are other antiseptics which would be more suitable, and I intend to test any which seem likely to yield good results. Whatever substance be used, however, I venture to think that the results already obtained show that the principle on which it ought to be applied, and on which it will prove most satisfactory, is that which I have attempted to indicate in this paper.

—

On Chancre of the Meatus and Urethra in the Male.

In an interesting discussion of this lesion Dr. J. Nevins Hyde, Professor of Skin and Venereal Diseases in Rush Medical College, Chicago, presents the following conclusions:—

1. Chancres of the meatus and of the urethra are symptomatically distinct.

2. Chancres of the meatus are chiefly remarkable for their irritability, in consequence of the passage over them of the urinary current, their tendency to phagedena, and the characteristic deformity of the glans which they frequently occasion.

3. Intra-urethral chancre, as distinguished from visible chancre of the meatus and chancre involving in part only the rim of the urethral valve, is of exceedingly rare occurrence.

4. Intra-urethral chancre, invisible or but imperfectly visible to the eye unaided by the endoscope, can usually be distinguished as such in consequence of the mass of induration which lies immediately beneath the urethral mucous membrane at the site of the lesion, and is readily recognized by the touch through the external tissues of the male organ.

5. Intra-urethral chancres are accompanied by very scanty or insignificant discharge, and when the latter is present, it bears no proportion to the evident signs of disease connected with the sclerosis.

6. The reddened furrow or sulcus, covered with a thin secretion, visible in the floor of the fossa navicularis, especially in the subjects of gleet, should never be mistaken for intra-urethral chancre.

7. When a man exhibits a decidedly purulent urethral discharge, without coincident symptoms of unmistakable syphilis, he can be safely pronounced free from all danger of the last named disease, provided always the period of incubation of syphilitic chancre has, in his history, already lapsed.

8. Intra-urethral chancre need therefore never be mistaken for gonorrhœal disease, as the two affections are so distinct that a differential diagnosis can usually be satisfactorily established without the aid of the endoscope.

9. For many reasons the endoscope should be regarded as a valuable adjuvant in the diagnosis of urethral disorders, and recourse should be had to it in all doubtful cases.—*Chicago Medical Journal*, Aug. 1880.

—

Digital Compression of Aneurisms.

Dr. Pize (*Bulletin de Thérapeutique*, April 30, 1880) condemns the teaching of Bellingham and Broca, to the effect that total compression gives rise to the

formation of soft or passive clots in an aneurism, while partial compression favours the formation of solid fibrinous clots, which alone conduce to repair. The author advocates the retention of digital compression during the first twenty-four or forty-eight hours, after which it should be intermitted at night, to allow the patient to sleep. He considers that total digital compression offers advantages over any other means of treatment, inasmuch as (1) it is not dangerous; (2) it is more rapid in its action; (3) it is more often successful, and gives more brilliant results; (4) it has succeeded in cases in which partial compression has failed. He says that the reason why this treatment is most successful is because it most conduces to coagulation of blood within the aneurismal sac.—*London Med. Record*, July 15, 1880.

—

Bony Tumour in Muscle.

In the *Presse Méd. Belge* Dr. THIRIAR relates the case of a sawyer, thirty-six years old, whose foot slipped while playing at skittles, he at the time having in his hand a bowl weighing between twenty and thirty kilos. He felt a violent pain opposite the insertion of the adductor longus in the pubis. Next day he felt in this locality a tumour the size of a pea, which gradually enlarged in all directions. At first it caused neither pain nor inconvenience; but, after a while, pains came on, and motion became first difficult and then impossible. When Dr. Thiriar first saw the patient, some weeks after the accident, he found a hard conical tumour, five centimetres in length, extending from the pubis into the adductor. Its removal was accomplished between two and three months after the accident, the adhesion to the pubis being so strong as to require the use of a forceps. It was found to be a true osteoma composed of spongy bony tissue. It was supposed to have originated in the portion of the adductor attached to the pubis, and gradually invading the muscular tissue. Recovery from the operation was complete three months after the occurrence of the accident.—*Med. Times and Gazette*, July 31, 1880.

—

Case of Osteomyelitis.

Professor KÖNIG of Gottingen has reported (*Centralblatt für Chirurgie*, No. 14, 1880) the following case of recovery after amputation for suppurative osteomyelitis of the femur. The patient, a labourer, aged 39, had been laid up about eight years previously with suppurative inflammation of the left knee due to an injury to this joint. The man at that time had made a good recovery, and for the subsequent five years had been able to make full use of the affected limb. At the end of this period, however, the left knee had again become swollen without any evident cause. When the case was first seen by Professor König, the left lower limb was almost quite useless; the leg was semi-flexed, and there was a slight outward bending at the knee. The tibia had been dragged backwards, and the movements of the knee were restricted to slight flexion which caused much pain. It was thought necessary to excise the diseased knee. As in every instance of this condition of joint-flexion, abduction with much backward displacement of the tibia; the operation was attended with great difficulty, in consequence of contraction and shortening of the soft parts at the back of the limb. The wound remained aseptic for eight days, but subsequently, without any recognizable cause, suppuration came on, which increased, and was associated with fever, rising at times, and very irregularly, to 104 deg. Several incisions were made, but without good results, and it soon became evident that suppuration had extended along the shaft of the femur, and that the patient, pallid, and without appetite, was suffering from severe septic poisoning. Six weeks later

the affected limb was amputated at the middle of the thigh. In the division of the bone the saw passed through a large collection within the medullary cavity of putrid pus. Professor König hesitated, on account of the prostrate condition of the patient, to remove the limb at the hip, and made an attempt to save the remaining portion of the thigh by treating antiseptically the purulent osteomyelitis. By means of a sharp spoon mounted on a long handle, all the putrid and degenerated marrow was removed from the medullary cavity. This cavity was next cleansed by the introduction of plugs of cotton-wool impregnated with a concentrated solution of chloride of zinc until all bad smell was removed. The surfaces of the flaps having been washed with the solution of chloride of zinc, the wound was closed by sutures and drained, and finally covered by antiseptic dressings. A long drainage-tube was also inserted into the medullary canal. The dressings were renewed daily, and the medullary cavity washed out with a solution of carbolic acid injected through the drainage-tube. On the fifth day, as the discharge had a bad smell, the stump was laid open, and the surfaces of the flaps were again disinfected. The stump subsequently healed by granulation, and without any putrefaction of the discharge. The amputation was followed by a fall of the patient's temperature, and by much improvement in his general condition. In his remarks on this case, Professor König states that it is doubtful whether the suppurative osteo-myelitis was the result of a fresh infection after resection of the knee, or was due to a pre-existent osteomyelitic deposit. The latter view was formed by the existence made out at the time of the amputation of considerable persisted thickening along the femur. The case is regarded of some importance, as it proves the possibility of dealing successfully with acute putrid osteomyelitis—a much and justly-dreaded result of injury of bone—by removal of the suppurating medulla, and disinfective cleansing of the medullary canal with a concentrated solution of chloride of zinc.—*London Med. Record*, June 15, 1880.

—

Relapsing Luxation of the Humerus.

According to Roser, repeated luxation of the head of the humerus is due to enlargement of the communicating orifice between the shoulder-joint and the bursa of the subscapularis muscle. Malgaigne, on the other hand, held that it was the result of premature movements of the joints after the original injury, and of consequent incomplete cicatrization of the rent in the capsular ligament. Dr. JOESSEL, of Strasburg, states (*Deutsche Zeitschrift für Chirurgie*, Band xiii. Heft 2) that there is no anatomical evidence in favour of either of these views, and he describes nine preparations, four from subjects, who, as had been well known, had suffered from repeated dislocation of the shoulder during life. These specimens show, in the author's opinion, that the predisposition to relapse of the luxation is the result in some instances of extreme distension of the capsule, but in most of permanent separation of the tendons of the muscles inserted into the tuberosities of the humerus, which tendons, in most cases of luxation of the head of the bone, are torn away at their attachments. In some very rare cases, relapsing luxation at the shoulder is the result of fracture of the glenoid cavity or of the head of the humerus.—*London Med. Record*, July 15, 1880.

Midwifery and Gynæcology.

Intractable Vomiting of Pregnancy treated by the Inhalation of Oxygen.

Dr. PINARD relates (*Annales de Gynécologie*, Mai, 1880) the case of a patient, aged twenty-two, pregnant for the first time. Vomiting began in the first month, and continued with great severity, all food being returned, and the patient in consequence becoming very weak and emaciated. Ipecacuanha, citrate of magnesia, ether spray, hypodermic injections of morphia, were all tried without any effect. After the vomiting had lasted about seven weeks, the inhalation of oxygen by the Limouzin apparatus was tried. The first day of this treatment ten litres were inhaled, the second day twelve litres, and fifteen litres the third. From this time the vomiting ceased, and no more treatment was necessary. The patient rapidly recovered her health, and went to the full term of pregnancy. It should be added, that in the early part of pregnancy, the uterus was retroverted, and, Dr. Pinard remarks, many authors would look upon this as the cause of vomiting. But the retroversion was spontaneously reduced before the oxygen was resorted to, and the vomiting continued as before. The association therefore of the vomiting with retroversion was here nothing more than a coincidence. Dr. Pinard was led to prescribe the oxygen inhalation by the facts made known by Professor Hayem, showing the beneficial effect of oxygen inhalation in the vomiting of chlorotic patients. Whether in this case the vomiting ceased spontaneously, or in consequence of the oxygen, the author points out, the future only can show; and he hopes that others will use the remedy, and publish their results.—*Obstetrical Journal of Great Britain*, July, 1880.

—

Amputation of the Procident Arm for the purpose of facilitating Version.

Dr. PÉNARD (of Rochefort) writes on this subject, and to his paper is added a postscript by Dr. Pinard, of Paris. The authors refer to the statements on this subject in systematic treatises on midwifery, and though fully agreeing that such a proceeding should never be thought of while there is the least spark of life to be perceived in the child, yet, considered in relation to cases in which the child has been long dead, he thinks it has been unjustly condemned. He considers that there are cases in which version is impracticable, and where embryotomy seems called for, and yet in which, after the procident arm has been removed, turning can be performed; that therefore, in such cases, amputation of the arm may be looked upon as a substitute for embryotomy. Dr. Pinard adds a theoretical explanation of the view which Dr. Pénard's experience has led him to form. He supposes that there are cases in which, if the scapular projection is entire, the superior border of the shoulder may become fixed against the lower border, or the posterior surface, of the symphysis pubis. In such cases, if, by amputation of the arm, the projection of the shoulder is destroyed, the trunk will readily rise, and the lower extremity can be brought down. He states that he has known many times MM. Pajot and Stoltz perform version in cases in which it was previously thought impossible, after simply amputating the upper extremity.—*Obstetrical Journal of Great Britain*, July, 1880, from *Annales de Gynécologie*, Dec. 1879.

—

Treatment of Post-Partum Hemorrhage.

Dr. GEORGE J. ENGELMANN, of St. Louis, thus briefly outlines (*St. Louis Med. and Surg. Journal*, Aug. 1880) that treatment of post-partum hemorrhage,

which seems to him the most rational, as suggested by his own experience, and a careful analysis of the recent experience of able and judicious obstetricians.

A.—*Preventive treatment after induction of labour.*—1. Careful attention to every detail, and strict observance of obstetric rules in *every* case of labour.

2. The administration of a full dose of ergot as the head enters the vaginal orifice.

3. Should hemorrhage threaten, follow the uterine fundus with the firmly superimposed hand.

4. Express the placenta by Crêdé's method, and retain a firm grasp upon the fundus.

B.—*Treatment of an existing hemorrhage.*—1. External manipulation, pressure, and friction with the cold hand, or with ice.

2. Ergot—best subcutaneously, one or two large doses, whilst other manipulations are in progress.

3. Introduction of the hand into the vagina, and if no contractions follow, into the uterus; removal of clots and irritation of the surface, in order to stimulate contractions.

4. The subcutaneous administration of ether.

4*a*. Ice or vinegar, if at hand, may now be tried in the uterine cavity, but if they fail must not be persisted in.

5. The hot-water douche, which, if it is not followed by the desired contraction, will at least stimulate the patient, and cleanse the cavity, so that the final, safest, and most reliable remedy may be resorted to.

6. The iron swab—this may be used at once, if the introduction of the hand and the subcutaneous injection of ether fail, or after the trial of the hot-water douche; but in desperate cases must be resorted to at once, without losing time with other less reliable methods.

—

Puerperal Fever at Queen Charlotte's Hospital.

The annual report of Queen Charlotte's lying-in Hospital for 1879, contains an interesting account of an outbreak of puerperal fever in that institution. It appears that a severe outbreak of puerperal fever occurred in the hospital in the spring of 1879, necessitating the closure of the hospital from April 21st to September 20th of that year. Careful investigation failed to show that either overcrowding, defective sanitation, or ventilation, had any influence in the production of the fever. The midwives were attending their private cases in the district with impunity, nor was there a single case of fever in the out-patient department of the hospital, nor, so far as could be ascertained, in the district, during the whole time of the outbreak. On April 10th, the porter was stricken down with erysipelas, of which he almost died in the Westminster Hospital. On questioning him about his illness, it was elicited that, upon the removal of certain batches of linen from the disinfecting apparatus, for some time past he had felt ill, with violent headache, sore-throat, and sickness. This circumstance directed attention to the linen as a possible factor in the spread of the disease, and, on inquiry being made in this direction, it was found that the temperature in the disinfecting apparatus could be raised only to 180°, 70° below the proper standard. It also transpired that the porter did not know how to work the apparatus, and that his predecessor had been equally ignorant. Consequently, from October, 1878, to April, 1879, the apparatus was practically useless for the purpose of disinfection. It is here noted in the report that it was no part of the house-surgeon's duty to attend to the disinfection of the linen. Thus the disinfectant stove became a

propagator of disease, as the linen was kept for several hours in a close, moist, warm atmosphere, and the bulk of the linen came out of the stove feeling damper than when it was put in. In this condition it was sent upstairs, and, frequently without being aired, distributed to the patients. The linen, when it came from the laundress, was too damp to be disinfected. This arose from the shortness of the supply not allowing a sufficient time for drying and airing, and from a mistaken notion on the part of the laundress that the disinfecting apparatus was a drying stove. The outbreak of fever finally culminated in the deaths of no fewer than seven women out of twelve patients delivered in the hospital from March 27th to 29th, of whom ten came in within twenty-six hours. Extended investigation also revealed the following facts, which, coupled with the above, led to the conclusion that the fever was conveyed by, and probably originated in the linen.

1. The periodical outbreaks of fever, as far as could be ascertained, appeared to correspond with the returns of certain batches of linen from the wash.

2. Mothers and infants supplied with brand new linen did perfectly well.

3. Women who were doing well suddenly developed marked feverish symptoms, which corresponded with the change of linen.

4. Cases suffering from puerperal fever, and convalescing most favorably, appeared to be restricken; and this occurred more than once in the same patient. Some of these cases recovered, and some died. This necessitated latterly the use of brand new linen for infected cases, in order to give them a chance of recovery.

5. Infants were attacked with local erysipelas (nates et genitalia) after the application of certain linen which had been used by infected mothers.

6. None of the nurses who slept in the wards with their patients were affected. The linen supplied to them was household linen, and was not used by the patients.

In the course of the investigation, several circumstances were brought to light which probably had some bearing on the outbreak and spread of the disease.

1. Certain articles of linen were used by mothers and infants alike.

2. The linen had been habitually distributed damp and unaired, particularly on one floor, during the last six months.

3. That injunctions from the medical officers to return for stoving all linen sent up from the stove damp, were disregarded.

4. Infected and uninfected linen were sent to one and the same laundress.

5. The linen in use in the labor wards was the same as that used by the patients generally.

6. There was no inventory made of the linen before it was sent to the wash, only on its return.

7. For several months, the soiled linen from the labour-wards was mixed with the impure linen from the lying-in wards, and was kept together in closed cans for many hours. The labour-ward linen became so "heated through fermentation, that it could hardly be touched." It is believed that this, amongst other things, was a most important element in the spread of the disease.

8. Disinfection with the ordinary disinfectants, even boiling and prolonged baking at a temperature of above 250°, do not destroy the germs of mischief in linen highly charged with septic impurities. This fact has been more than once observed by the medical officers. Each baking and boiling, it is true, they say, lessens the virulency of the poison, the attacks caused by it become milder, but still some germs of mischief remain. This was remarkably the case on the reopening of the hospital in 1877, after the outbreak of fever in 1876. Although the hospital had been closed for three months, nearly every patient admitted on its reopening was stricken with feverish symptoms, and erysipelas soon showed itself. The number of admissions kept on increasing, the patients attacked be-

came fewer, and the type of the disease milder, until it finally disappeared. During this time, the greatest care was taken to have the linen properly stoved, and the apparatus was in perfect working order. A consideration of these facts renders it surprising that the outbreak did not occur earlier. The precautions taken since the reopening of the hospital in September, 1879, have hitherto had the happiest results, every patient being treated on antiseptic principles.—*Brit. Med. Journal*, July 31, 1880.

—

Acidity as a Cause af Sterility.

In the *Bulletin de Thérapeutique*, June 15, Dr. CHARRIER publishes a paper which he read at the Paris Société de Médecine; it terminates with the following conclusions: 1. In some rare cases, in women who are otherwise quite well, the utero-vaginal secretions are quite sour, as is seen by their reddening litmus. 2. This acid may prove an absolute obstacle to fertility, as spermatozoa are killed in even a slightly acid medium. 3. This abnormal state is to be remedied by an alkaline treatment, by means of alkaline drinks and baths, and tepid alkaline injections. 4. When this acid condition has been neutralized, conception may take place. (Two cases in point are detailed.) 5. This disappearance of acidity under the influence of alkaline treatment may explain the success which is obtained at alkaline and sulphuro-alkaline mineral water establishments in the treatment of sterility. In a note in the *Bulletin* of June 30, Prof. Pajot entirely confirms this statement, and says that for many years past he has been in the habit of prescribing injections of Vichy water in these cases of acid vaginal discharges. He observes that in fair women, and especially those with a red complexion, and more rarely in brunettes, the acidity of the secretions sometimes reaches such a point, that, in spite of the extremest cleanliness, the acid odour is perceived during the passage of the speculum. Dr. Charrier says that the best liquid for injection in these cases is that devised by Byasson (water 1000 grammes, the white of one egg, and fifty-nine grammes of phosphate of soda), in which he was able to keep spermatozoa alive for twelve days at a temperature of 36° C.—*Med. Times and Gazette*, July 24, 1880.

—

A New Means for the Prevention of Hemorrhage in Operations upon the Female Genitals.

This is the title of a lengthy paper in the *Annales de Gynécologie*, Mai, 1880, by Professor COURTY, of Montpelier. This remedy is the injection of hot water —that is, water as hot as the patient can bear it, practised several hours or several days beforehand, according to circumstances. The usefulness of such injections, he thinks, might be inferred beforehand, from the curious effect in stopping uterine hemorrhages, of heat applied, more or less near the uterus, in the lumbar region, or the vagina, etc. He refers, in illustration, to the writings of Chapman, Atthill, Gueneau de Mussy, and Emmet. He has now seen enough in his own practice, and that of others, to prevent him from having any doubt that hot-water injections will temporarily, if not permanently, arrest uterine hemorrhage. He looks upon it as a very natural transition from a hæmostatic action to infer a "decongestive." He has therefore often recommended hot-water injections in diseases accompanied with congestion, and with satisfactory results. From this he was led to recommend their frequent and prolonged use as a preparatory treatment for operations likely to be attended with hemorrhage. He has thus used it before performing incision of the cervix, removal of, or plastic operations upon, that part, vesico-vaginal fistula, etc., each time with the result, he believes, of much greater facility in the performance of the operation,

from the absence of the oozing which often obscures the surgeon's view of the parts he is dealing with, as well as with much less actual loss of blood. He does not think it is necessary for the patient, in using these injections, to assume the inconvenient posture usually recommended—*i. e.*, the pelvis raised, shoulders low, thigh flexed, etc.—but considers them equally efficient if the patient uses them on an ordinary bidet, and with a syringe capable of containing a good volume of fluid, and of being introduced well up into the posterior cul-de-sac. These latter points he looks upon as of great importance.—*Obstetrical Journal of Great Britain*, July, 1880.

—

Rudimentary Müller's Duct with Hernia of the Left Uterine Horn.

LEOPOLD reports the case of a patient (*Archiv für Gynäkologie*, Band xiv.), aged 28, who had been married eight years without children. She had never menstruated, but had, since her fourteenth year, regularly experienced severe menstrual pains, during which a tumour of the size of a plum in the left inguinal region swelled and became very painful. More recently, vicarious bleedings from the nose and lungs had appeared. On examination, a tumour of the size of half a hen's egg, uneven, and only slightly movable, was found. The vagina was only permeable for the tip of the index finger, measuring 3 centimetres in length, and ending in a *cul-de-sac*, in which no trace of the vaginal portion of the uterus could be found. The tumour in the inguinal region was diagnosed as an ovary, and it was determined to remove it on account of the suffering it caused. At the operation, the tumour was found to be the upper portion of a small uterus, with a Fallopian tube 6 centimetres long, and a somewhat small but well-developed ovary; below it was connected with the pelvic tissue by a narrow band. The tube, ovary, and uterus was ligatured and removed. The pedicle was tied and dropped in. Recovery was uninterrupted. The painful molimina have entirely ceased since the operation. The uterine cavity was of the size of a berry, filled with clear mucus; the mucous membrane was free from any appearance of old or recent hemorrhages. The ovary contained numerous follicles and corpora lutea. Dr. Leopold regarded the case as one of rudimentary development of Müller's duct, and congenital hernia of a rudimentary uterine horn. This last abnormity has hitherto only been described in one case, by Olshausen, in the *Archiv für Gynäkologie*, Band i. p. 41. In this case the left uterine horn, together with the ovary during pregnancy, could be detected in an inguinal hernia.—*Lond. Med. Record*, July 15, 1880.

—

On the Condition of the Uterine Mucous Membrane during Menstruation.

Dr. MOERICKE points out (*Centralblatt für Gynäkologie*, June 19th) that menstruation is a physiological process. If the general theory that the mucous membrane of the uterus were wholly, or completely, destroyed during menstruation were true, it would no longer be a physiological but a pathological process. Further, even, in certain diseases of the endometrium, we find that the epithelial coating is retained. He thinks that the theory of degeneration of the mucous membrane at the menstrual periods arose from the fact that the preparations examined were not fresh but exhibited *post-mortem* changes. The method which Dr. Moericke has adopted is to scoop off with a sharp curette a fresh piece of mucous membrane from the uterine surface. This he does at all stages of menstruation, before, during, and after. In every case, both in the fresh and the hardened preparations, he has found the epithelial covering completely preserved. In some cases it was found to be ruptured or perforated by an underlying blood-extravasation, but in no place was it degenerating.—*London Med. Record*, July 15, 1880.

Freund's Operation.

KUHN relates two cases (*Centralblatt für Gynäkologie*, May 8, 1880). One case was that of a woman, aged 39, the mother of seven children. The body and cervix of the uterus were the seats of cancerous deposit. The operation of total extirpation of the uterus was decided on, and, on November 18, 1879, it was performed with Listerian precautions. The bladder was emptied by the catheter, the vagina washed out with a five per cent. carbolic solution, and then a colpeurynter was inserted, and distended so as to raise the uterus up towards the pelvic brim. Chloroform was administered. The abdominal incision was commenced one inch and a half below the umbilicus, and carried down close to the symphysis pubis. The uterus was seized with a Nélaton's forceps, and drawn up. The intestines were retained in the abdomen, by an assistant, in a warm moist cloth. The peritoneal covering of the uterus was intact. The ovaries were adherent to the tubes and broad ligaments on both sides. The body of the uterus was divided on each side from the broad ligament by a bistoury, and separated in the same way from the vaginal insertion. After the removal of the uterus, some bleeding took place from a branch of the left uterine artery, which was tied. The right and left ovaries were also ligatured and removed. The sutures were then drawn through the vagina, and the edges of the peritoneum brought accurately together in Douglas's pouch. The pelvic cavity was washed out with a two per cent. carbolic solution, and the abdominal wound closed with deep and superficial sutures. Lister's dressing was applied to the wound. At the beginning of January, the patient was able to leave her bed; she did not, however, continue to recover, for the discharge from the vagina re-appeared, and she died on March 14th. At the necropsy, cancerous growth was found in the upper part of the vagina and bladder. The second case was that of a woman, aged 40, mother of two children. The operation was performed March 2, 1880. The same precautions were used as in Case 1, and the same steps pursued in the operation. Both ovaries were removed as in Case 1, and their ligatures cut short and dropped back. The cancerous mass invaded the cervix and body of the uterus. The patient died fifteen hours after the operation, of collapse. At the necropsy, a dirty thick fluid was found among the intestines. The bladder and ureters were uninjured, and not pierced by the ligatures. There was a small blood clot in the pelvis. [Both these cases may be regarded as examples of the questionable value of Freund's operation. In the first case, the disease returned, as it always must when the neighbouring tissues are involved; and, in the second, the patient died of collapse. It is observed that the colpeurynter was passed into the vagina in order to bring the uterus up within operative reach. The reporter, when performing Freund's operation on the dead subject, found, at the suggestion of Dr. Garson, that the uterus was raised much higher by inserting the colpeurynter into the rectum, and then distend it with water.—*Rep.*]—*London Med. Record*, July 15, 1880.

—

Oöphorectomy.

Mr. LAWSON TAIT reports (*British Medical Journal*, July 10, 1880) twenty-eight cases of oöphorectomy performed by himself within the past twelve months. The operation was performed on account of dysmenorrhœa in twelve cases, of menstrual epilepsy and mania in two, of menorrhagia in two, of hemorrhage from myoma in eleven, and of abscess of ovary in one.

In twenty-six completed operations there was only one death, and Mr. Tait regrets ever having attempted the operation, as the patient was almost moribund when he saw her. There was also one death among the two incomplete opera-

tions, which warned Mr. Tait that, unless the ovaries can be fully removed, they had better not be touched.

—

Castration on account of Retroflexion of the Uterus.

Dr. E. Börner (*Wiener Medizinische Wochenschrift*, Nos. 19 and 20, 1880) properly defines the meaning of his title as being the removal of both healthy ovaries, in order to bring about the cessation of menstruation, and the retrograde metamorphosis of the uterus, and so to cause the sufferings caused by retroflexion to disappear. He reports the case of a patient who was twenty-six, unmarried, and had suffered from the retroflexion for seven years. She had severe dysmenorrhœa, which, from the absence of all appearances of inflammation, was believed to depend solely upon the flexion. She had been treated, both generally and locally, by many medical men without benefit. Division of the cervix, with subsequent introduction of thick bougies, continued for a long time, only once produced relief to the menstrual pain. Treatment by intra-uterine pessaries failed on account of the great sensitiveness of the uterus, and vaginal pessaries could only be tolerated in the inter-menstrual period. During menstruation there were several hysterical convulsions, and very painful uterine contractions, which would gradually extend to the whole muscular system. There was complete loss of sleep, and all nutriment was refused, and this lasted nearly a week each time. The patient's strength was the more enfeebled by her having resorted to morphia, so that any slight irritation brought on divers hysterical symptoms. In this state of things castration was resorted to. The incision was made in the linea alba. The ovaries were not adherent. The patient recovered from the operation, leaving her bed four weeks afterwards. Menstruation should normally have occurred on the sixth day after the operation. It actually happened two days afterwards, but lasted four days only. The next three months passed without either hemorrhage or the customary pains. The following month there was "a trace hardly worth naming," and the accompanying pains were reduced to such a minimum that occasional rest in bed during one or two days was enough to relieve them. The two following months there was no hemorrhage. The author therefore considers that the result aimed at by the operation was completely attained. The symptoms occasioned by the retroflexion (sacral pain, etc.) gradually went away, although no care was taken to correct the deviation. The author sums up the position of this operation among the modes of treatment suitable for flexion, as follows: Deviations of the uterus accompanied with severe suffering may form an indication for castration, if every kind of treatment directed to the causal conditions of the flexion has been tried and found without benefit, and some contra-indication is present which prevents mechanical treatment from being tried, and yet relief is urgently called for. Among the contra-indications for mechanical treatment (which therefore may be spoken of as indications for castration) are certain kinds of inflammation—peri- and para-metritis with effusion, or acute inflammation of the uterus itself—and bleeding, unless this has arisen from venous congestion the result of the flexion. Also certain kinds of adhesions, such as render reposition difficult and painful; and abnormal sensitiveness of the displaced uterus to mechanical interference.—*Obstetrical Journal of Great Britain*, July, 1880.

Medical Jurisprudence and Toxicology.

Poisoning by Tincture of Arnica.

Another fatal case of poisoning by tincture of arnica is reported from Italy. A man, apparently in perfect health, drank a quantity of tincture of arnica estimated at from two ounces to two ounces and a half. He immediately complained of a sensation of burning at the stomach. Bicarbonate of soda was given, and afterwards some aromatic tincture. By these his sufferings were relieved for some hours, but the pain subsequently returned, and he died thirty-six hours after having taken the poison. This case suggested some experiments as to the irritating character of arnica. An ounce of tincture of arnica was evaporated and yielded an extract, a little of which spread over the skin caused a papular eruption. A larger quantity produced vesication, just as does cantharides. The residue found in the stomach of the poisoned man, evaporated, and then applied to the skin, produced effects exactly the same as those caused by the evaporated tincture.—*Lancet*, July 10, 1880.

Poisoning by Bronze-Powder.

The coroner for Middlesex recently concluded an inquiry as to the death of a boy aged 13, which, it was alleged, arose from inhaling bronze-powder while employed at the printing establishment of Messrs. Clay, Son, and Taylor. Bronze-powder consists of an alloy of copper (in very fine powder) and is used in printing in gold. The printing is done by means of a mixture of size and gamboge, the powder is then dusted over, and the superfluous portion wiped off with wool. The boy mentioned to his parents that the powder got up his nose, and produced a tingling in his nostrils. On the fourth day of this work (June 10th), he complained of sickness and pain in the bowels. On the 13th, Mr. C. W. Latham was sent for to visit him; he was still suffering from sickness and pain, with great distension of the abdomen, and tenderness on pressure; no diarrhœa. He fell into a state of collapse, and died on the 18th. By order of the coroner, Mr. Latham made a post-mortem examination on the 22d, and found that death had resulted from peritonitis; the mucous membrane of the stomach and intestines was not affected. He removed the stomach and a portion of the liver, which were analyzed by Dr. Tidy, who found that both contained copper; and who gave it as his opinion that the deceased had died from the effects of metallic copper-poisoning, and that he had inhaled the poison in the process of bronzing. Evidence was given to the effect that it was customary in printing establishments where bronzing was going on for the persons engaged in it to be allowed a certain quantity of milk daily, owing to the dangerous nature of the work; and a lad named Grayling stated that, while employed on the same kind of work, he became ill, and was compelled to give it up in consequence. On behalf of the firm, evidence was given by persons in their service, who stated that they never experienced any ill effects while engaged in the bronzing process. Dr. Meymott Tidy suggested to the notice of employers: 1. The free use of milk; 2. That the persons engaged in bronzing should wear a covering over the nostrils and mouth; 3. That the bronzing should be carried out in a separate room, and not in the general workshop, in order as far as practicable to limit the injurious effects of the process; 4. That a dress composed of calico or like material, tied round the neck and wrists, should be worn by those engaged on the work, and removed before leaving the premises; 5. That cleanliness should be strictly enforced, and the persons engaged in bronzing required to wash themselves before leaving the premises. The jury returned a verdict in accordance with the evidence of Dr. Tidy.—*British Med. Journal*, July 24, 1880.

MEDICAL NEWS.

School Hygiene.

After his summer's vacation the schoolmaster is again abroad in the land, and this seems an opportune time for us to call attention to one or two of the more important hygienic laws which are frequently neglected in the eager pursuit after knowledge, and for want of the wisdom which lingers far behind the pedagogue's track, are violated frequently in such a manner as to render scanty the return from his most earnest efforts or even blight utterly the harvest of his toil.

When an educational centre like Princeton College is managed in such flagrant violation of the dictates of sanitary science that typhoid fever (one of the eminently filth diseases of Mr. Simon) becomes rife within its precincts, proves fatal to its students, and necessitates the dismissal of its classes before the close of its regular term, the time has surely arrived for our profession to urge everywhere a more faithful attention to school hygiene.

One of the most important disadvantages to which the army of ten million American school children is subjected is the deprivation of sufficient pure air. In some of the worst schools the allowance of floor space has been reduced, by overcrowding infant pupils, to only two square feet, and the cubical air space to fifteen cubic feet per scholar. The average quantity of floor space allotted to each pupil should not be less than twenty-five square feet, and the air space ought to be at least two hundred and fifty cubic feet. In order to fulfil these requirements an apartment intended to be occupied by twenty-five scholars should be about thirty-two feet long, twenty wide, and ten high, and even then careful attention to ventilation and heating is necessary, or else impurity of the contained atmosphere during school hours will manifest itself not only to the sense of smell but in the languid and pallid aspect of the pupils. The presence of organic impurity from respiration to excess in the air of a school-room or other apartment can be quickly determined by Angus Smith's ready method of shaking half an ounce of fresh lime-water with ten fluidounces of the suspected air; when, if too impure for respiration, a milky precipitate is produced.

A greater danger of, however, a lesser evil lies in the tendency to produce myopia from want of sufficient amount or faulty direction of the light by which study is carried on. So much has been written on this subject of late that it is scarcely needful to more than remind our readers that the labours of Cohn, Erismann, Liebriech, and others, have demonstrated a

direct connection between the increase of near-sightedness and improper or excessive study under imperfect illumination. The windows by which a school-room are lighted should occupy the wall of the apartment on the pupil's left hand, and correspond in area to one-fourth, or at any rate, one-fifth of the floor space. When it is difficult to obtain so full an illumination from the left side, part of the light may be allowed to enter from the right side, but illumination from in front of, or from behind the scholars, should always be avoided; class books of all kinds ought to be printed in large type, on clear, white or faintly tinted blue paper, and all punishments which involve prolongation of the hours of study had better be exchanged for the discipline of complete and wearisome quiet, or of some form of fatiguing gymnastic exercise. Enthusiastic pupils on the other hand should be cautioned against applying themselves too closely to their books at home, under the disadvantages of dim artificial light, or in constrained positions of the body or a recumbent posture.

Much injury to the growing organisms of children is often inflicted during school life by faulty construction of the desks and benches or chairs furnished for the pupils. A very injurious habit of stooping forwards, thus compressing the lungs, and of bending down the head in such a way as to favour congestion of the visual apparatus, is often brought on by the tops of the desks being too nearly horizontal. The proper inclination of a desk lid upon which rests a book, used for reading or study, is 40° or 45°, but this angle should be reduced to about 20° during the progress of a writing lesson. The seats occupied by the scholars should be so placed that their anterior margins are in perpendicular lines beneath the edges of the desks; they should be broad enough to fully support the thighs, and ought to be supplied with backs inclined only a few degrees from the perpendicular, and supporting the pupil's spine at a point one inch below the level of the desk for boys, and about two inches higher up for girls. Desks and benches ought always to be accurately adapted to the stature of the scholars.

The frequency with which contagious diseases are disseminated by means of schools can scarcely be calculated, and in fact the danger from this source is so great, and so constantly impending that stringent regulations for its reduction are urgently required. During the alarm concerning smallpox in Philadelphia last winter, an imperfect effort was made to require children attending our public schools to give proof that they had been successfully vaccinated before admission, but no systematic attempt has, we believe, been made in this country to prevent the spread of scarlet fever, diphtheria, whooping-cough, measles, etc., in this manner. Children convalescing from these and other infectious maladies are often returned to school in order that they may make up for lost time as rapidly as possible, or even because they are restless and troublesome at home, with abundant supplies about their persons of germ-disease poison which

they sow broadcast among their schoolmates. Too frequently in the ignorance, carelessness, or feeble moral sense of guardians a slight benefit to the child is thus allowed to outweigh far-reaching injury to the community at large.

So great is the risk of serious or fatal disease being conveyed in this manner that we think private schools, where the principals require certificates from attending physicians to the effect that a returning convalescent is free from danger to other pupils, would be warmly sustained by the intelligent public, and when the value of some such precaution became recognized, as it soon must be, our authorities could doubtless ere long be persuaded to introduce it into all the primary and district schools of the land.

The importance of school hygiene can scarcely be over-estimated, because it is especially during their school life that our children acquire so large a part of the deformity and disease from which they suffer, and we have gladly embraced the period when, as at present, the minds of parents are directed towards the subject of school arrangements, to urgently invite attention to some of the more injurious, and, at the same time, more easily remedied defects, which mar the efficiency of our schools.

—

Transposition of the Viscera.—The *Moniteur du Calvados* reports a case of complete inversion of the thoracic and abdominal organs discovered in a post-mortem examination of the body of a young girl aged 17, under the care of Dr. Denis Dumont, principal surgeon to the Hôtel-Dieu Hospital at Caen. The whole of the viscera, although of perfectly normal form and structure, had undergone so thorough a displacement, that those of the right side were lodged in the left, and *vice versâ*. The left lung presented three lobes, whilst the right lung had only two. The heart was situated on the right side, and the arch of the aorta was directed to the same side. The liver occupied the left hypochondrium; the stomach and the spleen had taken its place in the right hypochondrium. Finally, the intestinal mass had undergone an analogous transposition. The relations of the organs to each other were perfectly retained, so that this arrangement in no way detracted from the perfectness of their functions. It was a well-marked example of that monstrosity known as splanchnic inversion, of which several cases, both in the living and in the dead subject, have been recorded in medical literature.—*British Med. Journal*, July 10, 1880.

—

Narcolepsy.—Under the name "narcolepsy" M. GELINEAU describes in the *Gazette des Hôpitaux*, a rare form of neurosis, characterized by an irresistible desire to sleep, sudden in its onset, lasting but a short time, and recurring at more or less prolonged intervals. This neurosis has some analogies with somnolence and catalepsy. It was described for the first time, in 1862, by Dr. Casse, who referred it to a serous and passive congestion of the meninges and of the brain. The persons suffering from it fall asleep any moment; their sleep lasts for a few minutes and they then recover their consciousness. The patient whose case is reported by M. Galineau fell asleep in this way four or five times during his dinner, letting his knife or fork fall, and breaking off in the middle of a sentence he was uttering. Up to the present time, the most varied kinds of treatment have not given any good result.—*Brit. Med. Journal*, July 31, 1880.

Hydrophobia.—M. MAURICE RAYNAUD inoculated a rabbit with the saliva of a hydrophobic patient, and the rabbit took the disease in five days. Two other rabbits inoculated with hydrophobic saliva also became hydrophobic. The conclusion drawn is that the saliva of hydrophobic patients is virulent and that this fact merits more attention than is now generally given to it.—*Brit. Med. Journal*, July 31, 1880.

—

Cod-Liver Oil and Iodoform.—Dr. FONSSAGRIVES having ascertained (*Progrès Méd.*, June 19) that the addition of iodoform and essence of anise effectually masks the repulsive taste of cod-liver oil, always employs this combination in cases where the union of iodine with cod-liver oil is indicated, iodine being conveyed into the economy in a larger proportion by means of iodoform than by any other preparation. Patients, after comparing this mode of taking cod-liver oil with the ordinary modes, unanimously declare in favour of the taste and smell of the former. To one hundred grammes of the oil a quarter of a gramme of iodoform and ten drops of the aniseed are added.—*Med. Times and Gazette*, July 3, 1880.

—

Certification of the Correctness of Clinical Thermometers.—The Winchester Observatory of Yale College has undertaken, under proper regulations, to verify thermometers sent to the observatory and to issue certificates of the same in like manner as is now done at the Kew Observatory in England. Thermometers must be sent at the expense and risk of the sender. The charge for verifying a clinical thermometer has been fixed at fifty cents.

—

International Medical Congress, London, 1881.—The International Medical Congress of 1881, will be held at London, August 3d to 9th inclusive. The Congress will be under the patronage of the Queen and Prince of Wales.

The work of the Congress will be carried on in fifteen sections. The meetings will be held chiefly in the halls of the University of London, and in Burlington House. Besides the general and sectional meetings, there will be a museum, to which contributions of professional interest will be made.

The executive committee have nominated the following as officers of the Congress: President, Sir James Paget, Bart., LL.D., D.C.L., F.R.S. Section I. *Anatomy*, President, Prof. Flower. Section II. *Physiology*, President, Prof. Michael Foster. Section III. *Pathology and Morbid Anatomy*, President, Dr. Samuel Wilks. Section IV. *Medicine*, President, Sir William Gull. Section V. *Surgery*, President, John Eric Erichsen, Esq. Section VI. *Obstetric Medicine and Surgery*, President, Dr. McClintock, of Dublin. Section VII. *Diseases of Children*, President, Dr. West. Section VIII. *Mental Diseases*, President, Dr. Lockhart Robertson. Section IX. *Ophthalmology*, President, William Bowman, Esq. Section X. *Diseases of the Ear*, President, William B. Dalby, Esq. Section XI. *Diseases of the Skin*, President, Erasmus Wilson, Esq. Section XII. *Diseases of the Teeth*, President, Edwin Saunders, Esq. Section XIII. *State Medicine*, President, John Simon, Esq. Section XIV. *Military Surgery and Medicine*, President, Surgeon-General Professor Longmore. Section XV. *Materia Medica and Pharmacology*, President, Professor T. R. Fraser, M.D.

Papers may be read in English, French, or German, and their authors are requested to intimate their intentions before the end of March, 1881, and to send an abstract of their papers before May 31, to William MacCormac, Esq., Hon. Secretary-General, 13 Harley Street, London, W.

Society Meetings.—The American Gynæcological Society will hold its annual meeting in Cincinnati on the 1st, 2d, and 3d of September. The Canada Medical Association meets this year at Ottawa on the 1st of September.

—

Connecticut Medical Society held its eighty-ninth annual convention at New Haven, May 26th and 27th, Dr. A. R. Goodrich, of Vernon, presiding. The following officers were chosen for the ensuing year: President, Dr. G. L. Platt, of Waterbury; Vice-President, Dr. Wm. Deming, of Litchfield; Secretary, Dr. C. W. Chamberlain, of Hartford. The next annual convention will be held at Hartford on the fourth Wednesday in June, 1881.

—

Maine Medical Association.—This Society held its twenty-eighth annual meeting at Portland on the 15th, 16th, and 17th of June, Dr. S. C. Gordon, of Portland, presiding. A number of essays and reports of cases were presented. Dr. O. A. Horr, of Lewiston, delivered the annual oration. The Society's visitors reported the Medical School of Maine and the Portland School for Medical Instruction to be in a very prosperous condition. At the latter school two-thirds of the candidates were stated to have been rejected at the preliminary examination in June.

The following officers were elected for the ensuing year: President, William Warren Greene, M.D., of Portland; Secretary, Dr. C. O. Hunt, of Portland. The next meeting will be held on the third Tuesday in June, 1881.

—

New Hampshire Medical Society held its ninetieth annual meeting at Concord, June 15th and 16th, Dr. T. J. W. Pray, of Dover, presiding. It was decided to hold the semi-annual meeting at Plymouth on the 2d of September, and it was stated that on the 3d the delegates and their families would be tendered an excursion upon Lake Winnepesaukee. The following officers were elected for the ensuing year. President, Dr. G. P. Conn, of Concord; Vice-President, Dr. H. B. Fowler, of Bristol; Secretary, Dr. M. W. Russell, of Concord. The next annual meeting will be held at Concord on the third Tuesday of June, 1881.

—

Medical College of Virginia.—The friends of better medical education will be gratified to learn that the Medical College of Virginia and the University of Virginia have made a departure in favour of the elevated standard of medical education. They have instituted a graded course and extended the term to nine months, with an examination at the end of each year. While the condition of these institutions may not warrant any further change at this time, we trust that this step will speedily elicit sufficient encouragement to justify the authorities in instituting a preliminary examination, and adding a third year to the course. As it is the medical student should feel grateful at the improved facilities which are now afforded to him.

—

Fiske-Fund Prize.—The Fiske-Fund Prize Committee of the Rhode Island Medical Society announce that, for 1881, a prize of $150 is offered for the best essay on either of the following subjects: "The Action of Medicine on the Cure of Diseases," and "Uterine and Ovarian Diseases as a Cause of Insanity."

—

The Volta Prize.—The Volta Prize of 50,000 francs has been awarded by the French Government to Prof. Graham Bell, of Boston, for his invention of the articulating electro-magnetic telephone.

Cammann's Binaural Stethoscope.—Mr. William Snowden, surgical instrument-maker of this city, has modified this form of stethoscope by adding a soft rubber cup to the chest end, which permits a more accurate application to the thoracic parietes, and soft rubber pads to the ear-pieces, which effectually exclude external sounds. The flexible tubes are freed from all woollen or silk coverings, and thus all friction sound arising from this source is avoided. These modifications, with also a change in the manner of applying the spring pressure to the ear-pieces, have resulted in a decided diminution in the cost of the instrument.

Personal.—It is announced that Dr. Sigmund, Professor of Syphilis in the University of Vienna, having reached his seventieth year, will retire upon a pension.

OBITUARY RECORD.—Died at Paris on the 8th of July, aged 56, PAUL BROCA, Senator and Professor of Clinical Surgery in the Paris Faculty. M. Broca acquired a world-wide reputation by his works on Aneurisms, published in 1856; on Tumours, published ten years later; and by his researches in Anthropology; indeed he may be said to have been the founder of that science. Concerning his important researches in aphasia the *British Medical Journal* (July 24, 1880) says: "The localization of the faculty of speech is one of the greatest discoveries of modern science. M. Bouillaud had shown that aphasia generally coincides with a lesion of the left hemisphere; but M. Broca, studying the anatomical lesion and the functional disturbance more minutely, demonstrated that aphasia is coincident with the destruction of a limited region of the encephalon—the posterior part of the third left frontal convolution. When that region is destroyed, speech is gone; so long as it is retained, speech remains. This is the rule—a rule almost without exception; and the exceptions even are far from incontestable. This was, as a matter of fact, one of the most interesting of scientific discoveries; it was, indeed, the first cerebral localization, and is at the present time the most precise and important. Since that time, the mechanism of the encephalon has been easier of comprehension. It is true that this mechanism is still very obscure, and of such a complex nature that it is difficult to conceive when it will be clearly and simply made out; but it is none the less true that, thanks to the precise determination of the aphasic lesion, it is known that there are regions in the brain where certain intellectual functions originate and become elaborated, to manifest themselves outwardly in the form of movements. The knowledge of this important and essential fact is due exclusively to M. Broca (*Bulletins de la Société Anatomique*, 1861).

—— At New Orleans, on the 2d of May, of pneumonia, SAMUEL CHOPPIN, M.D., aged 52 years. Dr. Choppin was a native of Louisiana, and was one of the founders of the New Orleans School of Medicine.

—— At London, on the 27th of May, in his seventy-fourth year, ALFRED SWAINE TAYLOR, M.D., F.R.S., late Professor of Medical Jurisprudence at Guy's Hospital.

Dr. Taylor had a world-wide reputation as an expert in all matters relating to medical jurisprudence and toxicology, and his works on "Poisons" and on "Medical Jurisprudence" are universally esteemed as standard authorities.

—— At Ramsgate, on the 27th of May, S. MESSENGER BRADLEY, M.D., one of the Surgeons to the Manchester Royal Infirmary.

To Readers and Correspondents.—The editor will be happy to receive early intelligence of local events of general medical interest, or which it is desirable to bring to the notice of the profession. Local papers containing reports or news items should be marked.

CONTENTS OF NUMBER 453.

SEPTEMBER, 1880.

CLINICS.

CLINICAL LECTURES.

PAGE

On Sexual Debility, Sexual Exhaustion, and Impotence. A Clinical Lecture Delivered at the Jefferson Medical College Hospital. By SAMUEL W. GROSS, A.M., M.D., Lecturer on Venereal and Urino-Genital Diseases in the Jefferson Medical College of Philadelphia, and Surgeon to the Hospital 513

On the Radical Cure of Varicocele by the Galvanic Écraseur. A Clinical Lecture Delivered at the Westminster Hospital, July 3, 1880. By A. PEARCE GOULD, M.S., F.R.C.S., Assistant-Surgeon to the Hospital, and Lecturer on Anatomy to the Medical School 521

HOSPITAL NOTES.

A Case in which One-third of the Cranium was Denuded by an Injury; recovery in fifteen days. By Mr. Spencer Watson 524

MONTHLY ABSTRACT.

ANATOMY AND PHYSIOLOGY.

PAGE

Origin of Blood-corpuscles. By Pouchet 525

The Presence of Bile in the Lymph and Blood when diverted from its natural channels of Elimination. By Kufferath 526

Indican in Health and Disease. By Dr. H. N. Heineman . . . 527

On a Filaria reported to have come from a Man. By Prof. Jos. Leidy 527

MATERIA MEDICA AND THERAPEUTICS.

Recent Investigations on the Action of Drugs. By Pantelejeff . . 528

Therapeutic Uses of Pilocarpin. By Pick 531

Method of Masking the Odour of Iodoform. By Dr. Lindemann . 531

The Use of Quinia in Connection with Nervous Sedatives. By Dr. Landon Carter Gray . . . 532

MEDICINE.

Tuberculosis as an Infectious Disease. By Dr. L. G. Bryhn . . 532

The Transmissibility of Tuberculosis by Milk. By M. Puech . . 533

Treatment of Infantile Paralysis. By Pally 533

Secondary Degeneration of the Spinal Cord. By M. Charcot . . 535

Fatal Chorea. By Mr. Octavius Sturges 538

On Nervous Phenomena of Gastric Origin. By M. Leven . . . 539

Acute Respiratory Paralysis of the Larynx. By Dr. Paul Koch . 539

Quebracho in Dyspnœa. By Dr. J. B. Berkart 539

Peculiar Disease of the Intestines. By Dr. Helweg 540

Treatment of Parenchymatous Nephritis with Pilocarpine. By Dr. Cortezo 540

Pilocarpine in Uræmia. By M. Boegehold 541

SURGERY.

Perfectly Bloodless Operation. By Esmarch 541

The Radical Cure of Cancer. By Prof. Kocher 542

Scleritis and Sclero-Keratitis. By Dr. Galezowski 545

Choroiditis after Relapsing Fever. By Trompetter 546

PAGE

Epileptic Amaurosis. By Christensen 546
Case of Acute Glaucoma. By Dr. Coursserant 546
Case of Convergent Strabismus of Intermittent Character. By Dr. Samelsohn 547
New Operation for Entropium of the Lower Lid in Old People. By Hotz 547
Abscess near the Lower Eyelid of Dental Origin. By Dr. Parinaud 547
Treatment of Granulations in the Pharynx and Larynx by Ignipuncture. By Dr. Krishaber . 548
Examination of Œsophagus under Chloroform. By Dr. Girard . 549
Foreign Bodies in the Air-passages. By Voltolini 549
Foreign Bodies in the Œsophagus. By M. Lannelongue 550
Diagnosis of Tumours of the Mammary Gland. By Dr. Samuel W. Gross 551
Paracentesis of the Pericardium. By Dr. P. Kummal 552
Modification of Lee's Operation for the Radical Cure of Varicocele. By Prof. James M. Holloway . 553
Essence of Winter-green in the Treatment of Purulent Cystitis. etc. By M. Perier 554
A Difficult Case of Stone in the Bladder. By Prof. Dittel 554
On a New Method of Arresting Gonorrhœa. By Mr. W. Watson Cheyne 555
On Chancre of the Meatus and Urethra in the Male. By Dr. J. Nevins Hyde 558
Digital Compression of Aneurisms. By Dr. Pize 558
Bony Tumour in Muscle. By Dr. Thiriar 559
Case of Osteomyelitis. By Prof. König 559
Relapsing Luxation of the Humerus. By Dr. Joessel 560

MIDWIFERY AND GYNÆCOLOGY.

Intractable Vomiting of Pregnancy treated by the Inhalation of Oxygen. By Dr. Pinard . . . 561
Amputation of the Procident Arm for the purpose of facilitating Version. By Dr. Pénard. . . 561
Treatment of Post-partum Hemorrhage. By Dr. George J. Engelmann 561
Puerperal Fever at Queen Charlotte's Hospital 562
Acidity as a Cause of Sterility. By Dr. Charrier 564
A New Means for the Prevention of Hemorrhage in Operations upon the Female Genitals. By Prof. Courty 564
Rudimentary Müller's Duct with Hernia of the Left Uterine Horn. By Leopold 565
On the Condition of the Uterine Mucous Membrane during Menstruation. By Dr. Moericke . . 565
Freund's Operation. By Kuhn . 566
Oöphorectomy. By Mr. Lawson Tait 566
Castration on account of Retroflexion of the Uterus. By Dr. E. Borner 567

MEDICAL JURISPRUDENCE AND TOXICOLOGY.

Poisoning by Tincture of Arnica . 568
Poisoning by Bronze-Powder . . 568

MEDICAL NEWS.

School Hygiene 569
Transposition of the Viscera . . 571
Narcolepsy 571
Hydrophobia 572
Cod-Liver Oil and Iodoform . . 572
Certification of the Correctness of Clinical Thermometers . . 572
International Medical Congress . 572
Society Meetings 573
Connecticut Medical Society . . 573
Maine Medical Association . . 573
New Hampshire Medical Society . 573
Medical College of Virginia . . 573
Fiske-Fund Prize 573
The Volta Prize 573
Cammann's Binaural Stethoscope . 574
Personal 574
Obituary Record:
M. Paul Broca 574
Samuel Choppin, M.D. . . 574
Alfred Swaine Taylor, M.D. . 574
S. Messenger Bradley, M.D. . 574
To Readers and Correspondents . 574